

EDITOR'S NOTES

This second 1988 issue has some bad news. Since last November the membership of BoSTUG (Boston Sinclair/Timex User Group) has declined from 175 to 150. We can't keep that up very long and still qualify as a user group.

The current issue has several articles by Jim Rodlin, whose enthusiasm and energy go a long way. Jim is the Sysop of the TIMEWARP Bulletin Board and has been a very stable and encouraging element of the active portion of our group.

Mike Mitchell appears again with the profile of how he uses the QL in his job.

And Al Boehm, our emissary to the Timex/Sinclair Winterfest in Orlando, Florida, is here again with some tips. (Can we have a report next time. AL?)

The rest is mostly gleanings from newsletters of other groups with whom we exchange and a LETTER from a MEMBER in CALIFORNIA.

I know that many of you feel that a lack of expertise in computers means that you have nothing to contribute. That is B___ S___! (A non-KEYWORD)

You have not been using your computer for all this time without having learned something. Try to remember your excitement when you first learned it. Maybe everyone else knows it, but maybe not! So please share your knowledge with the rest of us.

Everyone I personally know in the group is verbally articulate. You have opinions and you have questions. Both have a place in this newsletter.

Opinions include reviews of software and books that you

use, whether new or around for a while. Questions include all kinds of 'HOW to' matters that stump you.

Send them on paper, microcartridge (if QL) or over a modem. (Nearly half the original contributions to this issue arrived in my computer over a modem.)

So can we have some help?

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DIReCTORY

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723-8545
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ardware Library Lee Ball
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oftware Library Volunteer
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UPDATES

Last month's review of Taking the Quantum Leap omitted the address of Time Designs magazine. It's 29722 Hult Road, Colton, OR 97017. The price is \$26.00 ppd.

LETTER TO THE EDITOR

Glad to see that the BCS T/S group is still alive and we enjoyed your Jan. newsletter.

South Bay Computer Club
T/S MEETING NOTES:

ED GREY (Mr. Modem) filled in with an overview of the latest national news of the Florida fest which he will not attend and the Northwest which he WILL. He gave Fred N. a plug on his new TS100/ZX81 Scram HiRes board. Also don't forget Fred's TS1000 window 80 col modem program.

BBS NOTICE: DAVE CLIFFORD's board is down for repairs. ED's NEW BBS is 1-213-971-6260

(G & C Computer Products)

MARIN WILCOCK reviewed the QL keyboard problems. He has developed a fairly involved 'fix' and if anybody is interested, I will pass the information on.

BOB SCHINKE (Mr. Rocketman) has been working with Larken for the past couple of years to get a 2068 disk system running. As he looked back at all the integration problems he had to conquer, his advice was to buy the 'turnkey' package. The whole system now works great and does all the things you would expect a drive system to do.

BOB uses a TS1000 for field calculations during model rocket launching meets in the Mohave Desert.

- John W. Petersen
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SINCLAIR USER PROFILE

MIKE MITCHELL works for RICHARD DANA Corp as a mechanical engineer. The company designs and builds automatic assembly equipment which need custom cams (with a small C - the kind that built the industrial revolution - not the CAM's that help fuel the electronic revolution.

[A cam is a machine element that produces a repeatable motion as it rotates on a shaft. Cams offer precision and high reliability making them as popular today as they were thirty years ago.

The following is Mike's account of how he used the superior qualities of the QL's Super-BASIC and QDOS to improve his firm's productivity and save gobs of money in the design and production process. Ed.]

Mind you that I never intended to marry it but like many of my projects, it began with the thought that I could do something better than someone else and has progressed to becoming a part-time obsession.

When I began my present job, my employer was renting a time share computer with an old 110 baud teletype machine as a terminal. That computer had special software to generate cam profile numerical data that was then used by an numerically controlled milling machine to cut the cam profile.

To design a cam, the engineer made a long distance call to Michigan, logged on the computer, input some parameters, waited and finally received numerical control codes punched onto paper tape.

A machinist spooled the paper tape onto a portable reader and downloaded the control codes into his automatic milling machine.

The time-share computer service cost \$300.00 a month plus about \$80.00 per cam design. In addition, the 110 baud data transfer rate and the 'user-unfriendly' software cost an engineer 40 minutes per design.

On my own time, I began writing SuperBASIC software to replace the time-share system. I convinced my boss that the math was correct but was unsuccessful downloading the numerical control code from my Sinclair QL to the milling machine.

It turned out that the RS-232 on the particular machine was synchronous, not asynchronous - a distinction lost on many who are computer literate and harder yet for those unfamiliar with computers to understand.

However, my boss was interested in the idea. He believed that it was only a matter of getting a 'better' computer since mine was 'just a toy'.

We got a CAD/CAM system comprised of a Compac computer with Computervision software. I planned to translate my program over to the Compac.

I had often heard from MS-DOS 'experts' that writing programs in BASIC is impractical and unprofessional, but I assumed that there would be a BASIC language for IBM compatibles similar to SuperBASIC. Turbo Basic by Borland looked promising and I set out to translate my 50K program.

It didn't take long to find out that Turbo Basic does not hold a candle to SuperBASIC. The MS-DOS 'experts' who denigrate BASIC as a programming language are talking about BASIC, not SuperBASIC.

As good as Turbo Basic is compared to other BASICs for IBM's, it is woefully lacking in features we take for granted

in SuperBASIC. It does not let you label your loops. String slicing is tortuous and STR\$ behaves differently depending on whether the number is positive or negative.

Emulating QDOS's coercion defeated me and WINDOWing and SCALEing in SuperBASIC had no equivalent in Turbo Basic.

Every procedure and function required a Turbo Basic SHARED statement if a variable were global, chewing up bytes at an alarming rate. My QL knew that if I didn't declare it as LOCAL, it must be global.

Bugs, errors in documentation and inferior code finally forced me to admit to my boss that I had made a judgement error in recommending an MS-DOS equivalence as a solution.

Well, I talked my boss into doing what we should have done in the first place. He got a full blown QL with dual floppy drives, Trump Card and color monitor. My program is now TURBO-CHARGED in modules and works faithfully everyday.

The code for the automatic milling machines is transferred to the COMPAC because it has a 40 MEG hard drive to store the stuff and is wired for the necessary data communication -- the QL does the thinking.

MS-DOS 'experts' simply do not know about Superbasic and many who cut their teeth or whatever on an expensive MS-DOS machine are too embarrassed to even acknowledge the Quantum Leap.

The only problem that I still have is the constant temptation to make improvements to the program which, by the way, paid for the QL system in less than three months of not needing to time-share on another computer.

- Mike Mitchell

GLEAMINGS FROM THE PRESS

[HATS, the newsletter of the Harrisburg, PA TS User Group]

Q_LINK Update

[The author had had difficulty with Xmodem transfers with the terminal software for the QL, called Q_LINK]

I decided to rewire a stock RS-232 printer cable for modem use. The pinouts are given in the Q LINK manual. I moved a wire on pin 5 to pin 4 of the DB-25. I snipped off the DB-9 and rewired it for the given pinouts. I replaced it with a DB-9 I bought at Radio Shack.

My tests show that both the Modapter Plus and the new cable work equally well on local systems at 1200 baud. Text and Xmodem transfers work flawlessly on both.

On CompuServe, text works flawlessly on either the new cable or the modapter, but in Xmodem transfers I am getting a lot of errors with the Modapter which show up as many repeats. Xmodem transfers using the new cable work flawlessly when CompuServe is not busy. I still get some errors when CompuServe or perhaps the CompuServe mode I am using is busy.

- (Author not cited)

!T/S 1000 Corner!

Here's another game for your TS 1000 or ZX81. I call it "MARBLES". It uses the same screen-reading technique as my last program ("MINES").

This program is a pinball-like marbles game. The object of the game is to score the most points by dropping your marbles into the high-scoring slots. At the beginning, you are asked for the number of players. (Enter 0 to watch the T/S 1000 play with itself). Then type in the names of each player.

For each turn, you have five marbles. Press a key to launch a marble. The computer will play its own marbles automatically. After five turns, the game is over.

Lines 10 through 45 print out the triangle-shaped field of pins that the marbles bounce down through. Lines 50 through 130 set up the rest of the game board, input the players' names and reset the players' scores. The arrays P\$() and S() hold the players' names and scores. The variable N is the number of players.

The main part of the program is from line 200 to line 240, where the marbles are falling down towards the score slots and bouncing off pins along the way. This is accomplished by repeating a loop of instructions that do the following:

1) Look at the screen immediately below the marble (at line 1000). The content of the screen at that point is stored in the variable C.

2) If a pin is at that point (if C=3), move the marble randomly to the right or left of the pin. (Add or subtract 1 from variable X. The co-ordinates of the marble

at any given time are stored in Y and X.

3) Now move the marble down one position. (Add 1 to Y.)

4) If we are at the bottom of the screen (if Y=20) then skip to the scoring part; otherwise repeat the loop.

Scoring is easy. Just look at the screen below the marble when it reaches the bottom (get C) and subtract 28. If you look in the back of your TS 1000 user manual (you still have it, right?), on page 138, you will find the TS 1000 character codes.

Look at the code for "3". It's 31. This is returned from line 1000 when the marble lands on a "3". Subtract 28 and we get 3, our score. Now find the code for an asterisk. Subtract 28 from that to get -5! Your best bet is to avoid landing your marbles here!

Type in the program and play a few games. Scoring is (theoretically) completely random, but the TS 1000 seems to win more often than not! See you next issue!

```
5 REM MARBLES BY JIM RODLIN
10 FOR Y=0 TO 7
15 LET HS=0
16 LET W$=""
20 RAND 0
25 LET X=Y
30 FOR X=15-X TO 15+X STEP 2
35 PRINT AT Y*2+1,X:CHR$ 3
40 NEXT X
45 NEXT Y
50 PRINT AT 1,0:"[Five GRAPH
IC/SHIFT-7's]"
55 PRINT AT 20,6:"@ @ @ @ @
@ @ @ @" ["@ "=GRAPHIC/SPACE]
60 PRINT TAB 6:"@9@3@1@*@5@0
@1@3@7@"
65 PRINT AT 2,0:"NUMBER OF P
LAYERS?"
70 INPUT N
75 LET N=N+1
80 PRINT AT 2,0:"[18 Spaces]
"
85 DIM P$(N,8)
90 DIM S(N)
```

```

95 FOR X=1 TO N-1
100 INPUT P$(X)
105 LET S(X)=0
110 PRINT AT X+1,0;P$(X);" ";
S(X)
115 NEXT X
120 LET P$(N)="T/S 1000"
125 LET S(N)=0
130 PRINT AT N+1,0;P$(N);" ";
0
135 FOR T=1 TO 5
140 PRINT AT N+2,0;"TURN ";T
145 FOR P=1 TO N
150 PRINT AT 0,20;P$(P)
155 PRINT AT 0,0;"OOOOO"
160 FOR B=4 TO 0 STEP -1
165 LET Y=0
170 LET SC=PEEK 16396+256*PEE
K 16397
175 IF NOT P$(P)="T/S 1000" T
HEN IF INKEY$="" THEN GOTO 175
180 FOR X=B TO 14
185 PRINT AT Y,X:"O";AT Y,X;"
"
190 NEXT X
195 PRINT AT 0,15:"O";AT 0,15
:" "
200 GOSUB 1000
205 PRINT AT Y,X:" "
210 IF C=3 THEN LET X=X+1-(2
AND INT (RND*10)<5)
215 IF C=3 THEN PRINT AT Y,X;
"O"
220 LET Y=Y+1
225 PRINT AT Y-1,X:" "
230 PRINT AT Y,X:"O"
235 IF Y=20 THEN GOTO 245
240 GOTO 200
245 GOSUB 1000
250 LET S(P)=S(P)+(C-28)
255 PRINT AT P+1,9;S(P):" "
260 PRINT AT Y,X:" "
265 NEXT B
270 NEXT P
275 PRINT AT N+2,p:"[Six spac
es]"
280 NEXT T
285 PRINT AT 0,20;"[Eight spa
ces]"
290 IF N=1 THEN GOTO 355
295 FOR X=1 TO N
300 IF S(X)=HS THEN GOSUB 345
305 IF S(X)>HS THEN GOSUB 335
310 NEXT X
315 PRINT AT 0,16:"THE WINNER
WAS:"
320 IF W$="T/S 1000" THEN LET
W$="*ME*"
325 PRINT AT 1,23-(LEN W$)/2;
W$

```

```

330 STOP
335 LET W$=P$(X)
336 LET HS=S(X)
340 RETURN
345 LET W$="TIE"
350 RETURN
355 PRINT AT 1,18;"HIGH SCORE
:"
360 IF S(1)>HS THEN LET HS=S(
1)
365 PRINT AT 1,29;HS
370 GOTO 120
1000 LET C=PEEK(SC+33*(Y+1)+X+
1)
1005 RETURN
2000 SAVE "MARBLE@" ["@" = GRA
PHIC/S)
2005 RUN

```

MICRODRIVE LABELS

Now that you can only get Microdrive cartridges without labels, you resort to almost any indignity to identify the cartridge.

HINT Use 1-line correction tape from the stationary store. It is self-sticking and is just the right width for the space at the end of the cartridge.

- Al Boehm

[It is also useful for hiding paper edges when you do a cut and paste for a newsletter, and you don't want the copy machine to pick up the shadows of the line edges.

- Ed.]

If you try to SAVE, LOAD, VERIFY, or MERGE with an improper filename:

E.g. SAVE "file

without a closing quote, the line editor rejects the structure as being illegal.

Most people then fix the error and proceed.

Keep trying to enter the illegal structure 9 times and the ROM crashes.

So who would think in designing the ROM that anyone smart enough to program a S/T 2068 would try to execute the same illegally structured statement 9 times?

You would if you wanted to see some very pretty displays on your screen.

- Jim Rodlin

HARDWARE TIP FOR THE QL

Does your QL sit here and stare at you on powerup, just daring you to press F1 or F2?

And when you hit it what happens? NOTHING!!! Right?

Before you chuck the QL into the trash, or go into deep depression, or consign Sir Clive to the seventh level of Hades, try this simple trick.

Remembering that the QL has a MEMBRANE KEYBOARD and that keys can stick, run the back of a finger nail over all the keys (special notice to space bar and ENTER key, please).

See, the stuck key on power-up is read by the QL as some other key than F1 or F2, so of course it is doing what comes naturally.

- Peter Hale

MOVING A FILE FROM the QL to an IBM-XT and reverse is really quite simple.

You need three things:

- 1) a modem on the IBM and the terminal software PROCOMM.
- 2) a break-out box wired to be a specialised null modem, and
- 3) some SuperBASIC software.

If you are transferring a Quill document directly, the IBM utility TEXTCON.EXE will helpfully strip the control codes once the file has been transferred to the IBM.

- 1) You have your IBM and PROCOMM in ASCII mode running at 2400 BAUD, right?

You will be using the serial port on the QL which is configured as DCE (Data Communications Equipment) and can use your printer cable.

The IBM will be using the computer port, configured as DTE (Data Terminal Equipment).

- 2) Now hook up your break-out box as a null modem. The pin numbers are in raised letters on the connector when viewed end on.

The significant pins for the breaker-box null modem are 1, 2, 3, 7, 20 and 25 coming from the QL.

On the IBM side the significant pins are 2, 3, 4, 5, 6, 7, 8 and 20.

Pins 2, 3, 7 and 20 connect directly, but on the QL side connect pin 1 to pin 7 and pin 25 to pin 20.

(Note that on the QL pins 6, 7 and 8 are connected internally to +12v ground)

On the IBM side pins 4, 5, 6 and 8 must be connected together.

What is happening?

On the QL, using the serial port, pin 2 is the TXD input and on the IBM it is the TXD output. Similarly pin 3 is RXD for both computers. Basically the QL is now set to behave as if it were a modem.

Pins 7 on the IBM is the signal ground which connects to both pin 1, the signal ground on the QL, and pin 7, the +12v ground.

Pins 4, 5, 6 and 8 in the IBM are tied together so that the handshaking is permanently enabled. On the QL it is handled from the software.

Pin 20 on both sides is for DTR (Data Terminal Ready). It is also tied to pin 25 on the QL side to be connected to the +12v ground. (I am not sure why.)

3) Now the SuperBASIC software in the QL.

```
10 Baud 2400
20 D$="MDV1_"
30 DIR D$
40 INPUT "Input ASCII file to
send: ";F$
50 OPEN_IN #5, D$ & F$
55 OPEN_NEW #6, SER1
60 IF EOF (#5) THEN CLOSE #5:
PRINT:PRINT F4:" upload
completed": GOTO 70
62 A$=INKEY$(#5): PRINT A$::
IF A$=CHR$(15) THEN
A$=CHR$(13)
64 PRINT #6,A$: GOTO 60
70 x%=200:y%=820
80 BEEP 0,x%,y%,10,10,14,1,2
90 FOR a=1 to 1000: NEXT a
100 BEEP
```

This program will load a file from mdv1_ and transfer it to the serial port where it will be received on the IBM PROCOMM terminal software, provided

you have set the Download file name in PROCOMM.

It is also possible to ignore the connections for pins 20, and forget the terminal software on the PC side.

In this case it is necessary to ENTER from the keyboard on the QL "copy mdv1_fred to serialsz" on the IBM side ENTER "copy mdv1_fred"

It is said that you can also transfer from the IBM to the QL by reversing the instructions.

[The above article is taken from information is several sources. 1) a Vancouver, BC, Sinclair newsletter received from Harvey Taylor of Q_LINK fame. 2) an editor's note in Quanta, Vol 4, #12, January 1988, page 5, and 3) the appendix of Mastering Serial Communications, by Peter W. Gofton, 1986, Sybex Inc., \$19.95 at the MIT Coop.]

- Peter Hale

QL PROGRAMING TIPS

I never saw it mentioned anywhere specifically, but I have found that in SuperBASIC you run into trouble if you have too many LOCAL variables.

I suspect the same is true in ARCHIVE.

Practical experience has taught me that no more than 8 separate LOCAL variables should occur in a given program.

What to do if you need more? It is unlikely that a given procedure will need more than 8 LOCAL variables. Just remember to use those same characters when defining local variables in other procedures.

- Al Boehm

SIR CLIVE'S Z88

[Downloaded from TIMEWARP BBS]

[Steve Green saw the new Z88 laptop from Sir Clive's new firm, Cambridge Computers, at a Washington, DC, ST user group meeting. His impressions follow]

The Z88 is small (8 1/2 x 11 inches), black, and light (under 2 lbs).

It has a 90 column by 8 row liquid crystal display. The monochrome blue on blue is clear even in bright light.

The keyboard has a grid covered with flexible black rubber instead of a bubble membrane - rugged and coffee proof! Seems the best keyboard ever made by Sinclair.

The integrated software - word processor, spread-sheet, and database, plus calculator, diary, calendar, VT52 terminal emulation and BBC BASIC comes on a 128K ROM chip.

As always there is a new operating system called OZ (written by an Australian ?) that is menu driven and fully multitasking.

On board memory is 32k, but three expansion ports allow up to three megabytes of memory expansion!!! (only increments of 128k are now available but 1 megs are in the works).

There are no drives to store files (hence the light weight) but four AA batteries keep the ram fresh even when the computer is turned off for up to a year. They will run the computer for 20 hours. A 6v AC Adapter allows use on the mains. Batteries can be changed without losing memory thanks to the super capacitor built into the circuit.

Three ports are included. (1) an RS-232 serial port, (2) a port for RGB monitor and disk drive and (3) a slot accessing the entire data bus (shades of the ZX-81).

Currently the price for the UK version is \$479.00 from Sharp's (Rte 10, Box 459, Mechanicsville, VA 23111 Phone (804)746-1664).. 32K Rom and 128k Ram expansions are \$35.00 and \$85.00 respectively.

The U.S. model, scheduled for February release, has been held up getting FCC clearance. (Have we heard that before, Sinclair fans?)

Steve sees the Z88 as far superior both in features and price to the Tandy 100 and 200 models, but notes that the U.S. market is MS-DOS crazy.

Files can be transferred to the QL (or an IBM) with the right cable and software and without a modem. The true portability more than offsets the lack of true compatability.

- From a review by Steve Green

[Thanks Steve. Ed.]

PERSONALITIES

The January Newsletter drew an offer from a former 2068 user. She is donating her computer and software to the BCS.

I asked why she was giving up such an extraordinary computer as the 2068 and she replied that her grandchildren had given her a Macintosh Computer and she didn't want to hurt their feelings by not using it. Indeed, she said, Tasword 2 was a superior word processing program to the one she used on the MAC!!

- Peter Hale

SuperBASIC for BEGINNERS

BoSTUG members Peter Hale and Mike Mitchell are collaborating on a book of the 20 most useful QL SuperBASIC keywords for non-programmers.

The idea is to explain in some detail the KEYWORDS that are useful in entry from the keyboard, that is as direct commands, for getting more out of the computer.

The first KEYWORD is COPY.

COPY is used to transfer files between devices.

Any discussion of COPY must discuss devices as well. The QL User Guide (QLUG) Concepts section on devices is helpful but difficult to read.

A device is any peripheral attached to a computer. Examples are drives, keyboards (consoles), modems, monitors and printers.

Devices that accept output from a computer are called output devices. Some devices such as screens and printers are for practical purposes output only.

Others may permit both output and input to the computer. Networks, modems and drives are examples.

Five kinds of devices are attached to the QL, but some 'devices' appear in multiples.

The devices (with the device 'name' in capitals) are:

- 1) the CONsole: Input/Output
- 2) the SCReen: Output only
- 3) the SERIAL ports (printer or modem): Input/Output
- 4) the NETworks: Input/Output

5) the mass storage devices (FLOppy disk, HarDisk, Micro-Drive and RAMdisk): Input/Output

Data may be transferred between most devices.

Even novices with the QL are generally able to transfer files between storage devices.

The general form of COPYING is

```
COPY DEVn_fred_ext
to DEVn_fred_ext
```

where DEV is the storage drive, n is the drive number, and fred_ext is a generic file name including any extension.

E.g. copy mdv1_fred_doc to flp2_fred_doc copies a file named fred_doc in microdrive 1 to a file called fred_doc in floppy drive 2.

REMEMBER: A file stored on a drive always requires a device reference as part of its file name. Some programs (such as the PSION programs) provide default devices (and extensions) if you don't specify a device as part of the file name. Others require a device reference as part of the name of the file. If one way doesn't work, try another.

CONsole is similar to SCReen. Both open windows on the monitor screen. The difference is that CONsole also accepts input from the keyboard, whereas the SCReen is an output device only.

CONsole can also have a buffer as well by adding to its parameters an extension to indicate the number of bytes that can be buffered.

Both CON and SCR have large default windows in the upper center of your screen. You need only specify CON or SCR to have the default window

appear, but the size and position can be changed.

E.g. `open#4,scr_20x50a0x0
open#4,con_100x100a50x50_32`

both open a window 20 pixels wide BY 50 pixels high AT co-ordinates 0,0. It accepts output directed to channel #4.

E.g. `PRINT#4,"HELLO"`

Examples of Using COPY

E.g. `copy mdv1_fred to scr`

Choose any file that is on the cartridge in MDV1 and substitute exactly that file's name for the word 'fred'. Watch what happens.

A SuperBASIC program will look like a SuperBASIC listing; other files will have small squares where characters should be. This is a representation showing that a non-printing character exists.

It will whistle by on screen. To make it pause, stop the scrolling by pressing CTRL F5. To continue, press F5 (or any other key).

Any file can be sent to the screen in this fashion to learn something about what kind of file it is. (See IDing QL File Types, elsewhere in this issue)

There are two serial devices on the QL, 'SER1' and 'SER2'. 'Ser' alone defaults to 'ser1'.

Any file consisting of just printable characters can be sent to the printer (if it is attached to SERIAL port 1 and is turned on) as follows:

E.g. `Copy mdv1_fred to ser`

A file that has non-printing characters will still go to the printer. However, the non-printing characters may

include control codes for the printer itself that will cause it to react most unusually.

The expression 'Look before you Leap' comes to mind. If unsure, first copy the file to the screen. Remember how from above?

If you are able to use the networking in the QL you can copy to NET as well. But if you could do that you wouldn't need this little tutorial.

SERIAL ports (and NETWORK ports) are also input devices, so if everything is otherwise set up right, you can copy from such devices as well provided files are accessible at the other end.

More examples to develop ease (Remember to include the device name as part of the file name so that the QL goes to the right device to find the file.):

E.g. #1
`copy dev1_fred to dev2_fran`

changes the file name to fran but all else is the same.

E.g. #2
`copy dev2_fred to scr
or copy dev2_fred to con`

both do the same job of displaying the file contents on the default screen.

If you type very fast you can get up to 32 bytes ahead of the QL's ability to put the characters on the screen without a jam-up.

E.g. #3
`copy con to
scr_100x50a100x100`

is very interesting. What you type no longer appears in the usual WINDOW#0, but directly on the screen.

Regain control of the cursor with BREAK (CTRL <SPACE>).

E.g. #4
copy con to
con_100x50a100x100_32

opens the same window as in example #3 but sets the keyboard buffer to 32 bytes.

A very fast typist can get up to 32 bytes ahead of the QL's ability to put the characters on the screen without a jam-up.

E.g. #5
copy scr to con

gives a 'bad parameter' error message. Why? Think of two differences between CON and SCR.

E.g. #6
copy con to ser

will send what you type, not to the screen, but to the SERIAL 1 port, where you presumably have a printer.

When the characters you type fill a line or you press ENTER, the printer dumps its own buffer to paper.

Conclusion of COPY.

The above is by no means a complete rundown of what COPY will or won't do. There is more in the KEYWORDS section of your manual and also many improvements to this word in TOOLKIT II. But there is also stuff here you won't find anywhere else.

Mike and I hope this has been helpful and would appreciate feedback on the content and style of this tutorial.

- Peter Hale

MEETING NOTES

The February meeting at the University of Massachusetts Harborside Campus introduced was poorly attended, in part due to being a carryover from the cancelled January meeting.

Jim Rodlin demonstrated the break-through Larken disc controller for the 2068, a very reasonably priced controller for use with Shugart compatible drives and including printer thru-port.

Added bonuses to the package include several new keywords that facilitate windowing on the 2068 and the ability to copy protected software from cassette to disc. For more information contact Jim at his BBS voice number in the Directory on page 1.

Also demonstrated was Peter Hale's TAX-I-QL/87 spreadsheet template for the QL. Designed to do the 1987 Federal income tax with a minimum of fuss and a maximum of Schedules and Forms, the program is \$24.95 from EMSOFT, Box 8763, Boston, MA 02114.

We plan to conduct an active program of General meetings this year, but we need your input. Give us subjects that interest you and we will try to have the topic addressed.

Contact John Kemeny: 263-3347.

WANT ADS

FOR SALE or DONATION to worthy cause. S/T 2068. 2040 printer. TASword 2 & Interface. Miscel software. 723-8545 for prices.

FOR SALE: S/T 2068. Games, string floppy drive, interface and T/S 2068/1000 books/manuals. Includes PROfile data base, blank cassettes, floppy carts and misc accessories. \$100 takes it all. 723-8545.

Identifying QL File Types

There is nothing quite so frustrating as to get a disc or micro-cartridge full of programs and not know where to start in order to make the programs work.

About all that most people are sure of is that a file named 'boot' will load from drive one on startup.

Reading the directory (e.g. DIR mdv2_) will give a lot of clues. There are some conventions in using file extensions. They are widely used but are by no means universal.

<u>_aba</u>	an ABACUS spreadsheet
<u>_arc</u>	an ARCHIVE version 1.0 program
<u>_asm</u>	Assembly language source code (Will not run on a QL but is provided for those who can compile Assembly language programs and wish to make modifications.
<u>_bak</u>	A duplicate copy of a file with otherwise the same name.
<u>_bas</u>	A program written in SuperBASIC. Load then LIST to look for names of associated files. Many programmers include REM statements with instructions and operating tips.
<u>_bin</u>	A binary file. Loaded with LBYTE from a SuperBASIC program elsewhere on the medium.
<u>_boot</u>	A program to EXECute or LBYTE a file with a similar name. E.g. XYZ_boot will probably EXECute a file called XYZ_ex.
<u>_c</u>	C language source code
<u>_dat</u>	A file of data that needs a program to utilise.
<u>_data</u>	(See <u>_dat</u>)
<u>_dbf</u>	An ARCHIVE database file. Often associated with an ARCHIVE program with the extension <u>_prg</u> or <u>_pro</u> .
<u>_doc</u>	A Quill file.
<u>_ex</u>	A Machine code program. Execute with the command EXEC or EXEC_W (EX or EW with Toolkit II). Look for a boot program that may set parameters or load data or binary files before executing.
<u>_exe</u>	(See <u>_ex</u>)
<u>_exp</u>	A file exported by ABACUS, ARCHIVE, or EASEL. Depending on how it was exported may be imported to any of the three or to QUILL.
<u>_grf</u>	An EASEL file.
<u>_job</u>	Often a machine code program requiring EXEC or EXEC_W (See <u>_ex</u>), sometimes a binary file to LBYTE. (See <u>_bin</u>)
<u>_lis</u>	A file from ARCHIVE or QUILL that has been 'printed' to medium. If the appropriate printer_dat file was present when 'printed', 'copy xxx_lis to ser' (or with TOOLKIT II 'spl xxx_lis') will send directly to a printer.
<u>_prg</u>	A program for use under ARCHIVE. An ASCII file that may be imported to QUILL provided the extension is included.
<u>_pro</u>	A program for use under ARCHIVE, but in object code. It loads more quickly than ASCII files with the extension

_prg but must use 'load object "filename"' to load.

_rel Relocatable object code i.e. Machine code. (See _ex)

_scn A Screen file for use with ARCHIVE programs.

_task A Machine code file that must be EXECuted. (See _ex)

_x A Machine code file that must be executed. (See _ex)

Occasionally, some dingdong will name a file with an extension that is misleading. It's rare but does happen.

More common is that the name of the file gives no indication of its function or how to make it work.

In this case there is a simple way to get an idea of what is happening.

If you have TOOLKIT II, the command VIEW will show the part of each line that will fit on the screen: E.g. VIEW dev_fred.

Without TOOLKIT, or even with, ENTER the following:

copy dev_filename to scr or copy dev_filename_to con

QDOS has a default window for both of these devices (scr or con) and the entire file will be 'printed' to this window.

Have your fingers on CTRL F5 to stop the scrolling if you want to examine details of the file.

If the program is in SuperBASIC you will probably immediately notice the line numbers. You will occasionally see SuperBASIC programs without line numbers, which run as soon as they are loaded without having to ask them to.

If you see a column of numbers and/or word strings hugging the left-hand border, you may be fairly certain that you have found a data file, which is input to memory by another program either in SuperBASIC or in Machine Code. Files compiled (hence EXECutable) will have the name of the compiler used near the end of the file: Supercharge, Turbocharge, QL Liberator.

If, however, you see a lot of characters that look like little boxes, you know you have either a machine code file (which must be executed) or a binary file, consisting of bytes that must be LBYTEd and subsequently CALLED.

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