QUANTA

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INFORMATION ON THE GROUP

Membership of QUANTA, the Independent QL User Group, is by subscription to the group's newsletter, which is published monthly. Membership details are obtainable from the Secretary. Membership of the group is open to anyone with an interest in the Sinclair QL and compatible systems.

Members requiring assistance with problems related to the QL may write to or 'phone a Committee member. An attempt will be made to put them in touch with a member who can help with the problem. Alternatively send a note to the Editor, and the problem will be mentioned in the newsletter.

Workshops will be arranged from time to time in various parts of the country. Copies of the group's constitution and annual accounts are available from the Secretary.

The group maintains a software library. Most of the programs are free to members. Library lists and programs are available from the Sub-Librarians.

HONORARY OFFICERS OF THE GROUP

Chairman	Sydney Humphreys Wychwood,The Street Bramerton, NORWICH Norfolk NR14 7DW Tel (05088) 463	General Secretary	Philip Borman 1 Newtown Road RAUNDS, Northants NN9 6LX Tel (0933) 460690
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Newsletter Editor	Sarah Johnson The Corner House Loxley, WARWICK CV35 9JT Tel (0789) 842543	Software Librarian	Roy Brereton 94 Teignmouth Rd Clevedon, Avon BS21 6DR Tel (0272) 871917
Committee Member	Dennis Briggs 53 Gilpin Road Admaston, TELFORD Shropshire TF5 OBG Tel (09522) 55895		

Submissions to the Editor should be on a Microdrive or disk - any format, in a 'jiffy' bag or similar. Please include a paper copy where possible. Submissions for the library should be sent in a 'jiffy' with return postage to the Quality Controller, JAMES METHLEY, 4 PARKSIDE, LEA, PRESTON, PR2 1YS. Tel (0772) 736713 Sat/Sun anytime.

The Editor reserves the right to publish or reject, to cut or condense, any material submitted. The opinions expressed in the newsletter are those of the contributors, and are not necessarily those of the Editor or Committee Members.

NEW / AMENDED SUB-GROUP INFORMATION

Title	Location	Date	Contact
South-West	Dartmoor Motel, Ashburton	Next meeting Sunday 18th Nov. 2.30 to 7.00	Roy R.Johnson Flat 2 66 Victoria Road Exmouth, EX8 1DV Tel (0395) 275290
London	Marquis of Clanrickad Pub Southwick Street Nr.Paddington Station	1st Wednesday each month 1900 - 2300	Jerry Davis 6 Elmcroft Crescent Harrow, Middlesex HA2 6HN Tel (081) 863 1631
Denmark	Erling Jacobsen Raevenhojvej 36 (room)vaerelse 1011 2800 Lyngby Denmark	Irregularly, but usually a Tuesday at 19:30	Arno Hasnaes Hestkoblund 117 3460 Birkerod Denmark

CALENDAR

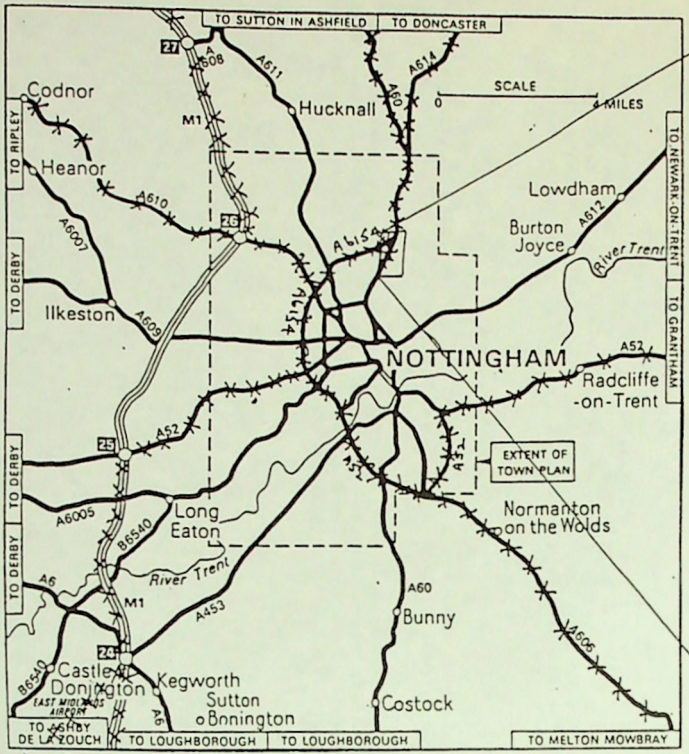
November 4th	Horticultural Hall, London	All Formats Show
November 24th-25th	Nottingham	Quanta Workshop
December 1st	Northern Home Computer Show	Stokes Hall, Leyland
December 22nd-23rd	Horticultural Hall, London	All Formats Show
March 9th-10th	Portishead	Quanta Workshop

NOTTINGHAM WORKSHOP

The Nottingham Workshop is to be held on the 24th-25th November at the Sherwood Community Centre, Mansfield Road, Nottingham. See the maps on following page for directions.

There are a limited number of rooms available at the Pelham Hotel, Pelham Road, Sherwood Rise Nottingham. Tel: (0602) 604829. The rate arranged for Quanta is £18 per person inclusive of breakfast. Contact the hotel direct for reservations stating Quanta.

NOTTINGHAM WORKSHOP



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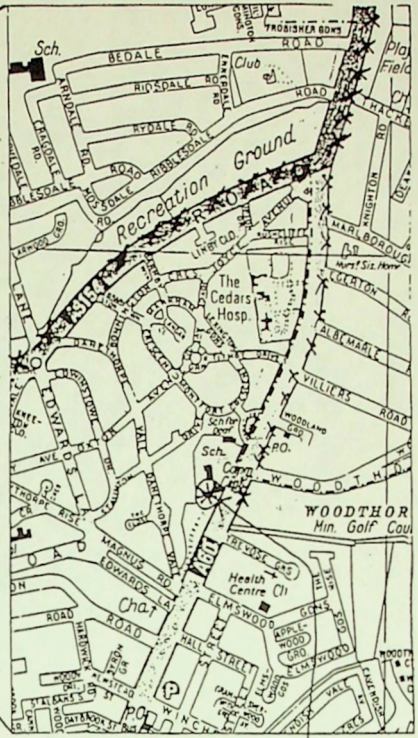

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RECOMMENDED ROUTES

COMMUNITY CENTRE

EDITORIAL

You should all have received your welcome booklet by now. I would like to thank Phil Borman on behalf of all the members, for the effort he put in to producing this booklet for us. It contains useful information for your use. This information can quickly become out of date. So we hope to be able to produce update sheets when we can.

The Consumer Protection Office, 155-157 Corporation Street, Birmingham, B4 6TH now have 20+ complaints against PDQL. (Note their new address, not as published in QL World). If any other members have had problems with non-supply of goods or any other serious complaint, write to the office above, giving full details.

The European Microfair at the EuroVolley Centre in Brussels on 6th October, was visited by several Quanta members including David and myself. This year the show took over the whole of the main sports hall, with a good showing of QL traders from England and other parts of Europe. A good selection of European user groups also attended making the QL area of the show the most popular among the visitors. We met various Quanta members from Europe including Peter Jaeger from Germaay, Wolfgang Lanerz from France and Eros Forenzi all the way from Italy.

There were also other machines including the brand new Next computer based on the Motorola 68040 processor! But I will leave the details for someone else to include in their report on the show.

Sarah Johnson

WE SHALL OVERCOME - ESSEX SUBGROUP

Shall we run a Workshop or not? Shall we run it for two days or just one? We will be competing with an All Formats show at Victoria - shall we still run the Workshop or not? Who is going to be available or are they going to Victoria instead? All of these questions faced Essex when they decided that, come what may, they were going ahead with their arrangements for September 1st.

The loss of the group chairman, John Mason, on his removal to Christchurch, tended to put a large spanner in the works but Ron Dunnett stepped into the breach and, from there on, it just seemed that every time that a possibility was suggested somebody gave a good reason for it becoming an impossibility!

As the day neared things began to take shape as, firstly the hire of trestle tables was confirmed and then the direction notices were made. The maps for the Quanta newsletter were finally agreed and then a rush began to try to get last minute information into the Sinclair QL World, Computer Shopper and New Computer Express.

Behind the scenes the Essex Group Chairman, Ron Dunnett and his wife Kath, were struggling with the refreshments problem and other members were beginning to worry about the available power outlets in the hall. Shortly before the event an electrician member, who had been unable to attend the group because of pressure of work, rang to say that he would be unable to attend the workshop but had made up an electrical harness that would provide more outlets. At last, the sun was beginning to shine upon us!

On the day the Essex group turned up early and in force. All of the traders that had previously given us vague answers turned up and quickly set themselves up, the electrical harness provided power for all and it was just the public that was needed!

The morning went slowly but from midday things changed as visitors from Belgium, Yorkshire, Lincoln, Norfolk and Surrey passed through the doors alongside those from Essex and London.

All areas were kept busy, the afternoon went like a flash, the traders admitted to a modest profit. Syd Humphreys and Phil Borman looked quite pleased and the refreshment ladies were counting off their teas/coffees in the 100's. An impromptu library service was setup by the group with programs being previously prepared and a number of members who had travelled miles from areas without a Quanta Sub-group were glad that they had made the journey and did not go away empty-handed.

At the end of the day Dennis Briggs gave a message of appreciation to Ron Dunnett and his wife Kath who was in charge of the catering service. Syd Humphreys made a presentation to both Ron Dunnett and Bob Gingell and it suddenly looked as though the show was over.

Essex members buckled to and started clearing up and, after a while, they all arrived at the same spot in the hall, the QView stand, and Essex were then accused of taking the tables away from the machines, as if we would! Later QView agreed to consider a talk to Essex members in November and, still later, Ron Dunnett was approached by traders for another Workshop in March next year!

Bob Gingell

SOUTHERN AREA GROUP

Yes we are still around, last month was a busy one though! We had our October meeting at the Worthing Workshop. The main subject of which was networking.

The workshop should have had (this is being written two weeks previous!) several traders in attendance. The first one south of London and east of Bristol. I hope those that travelled down were able to enjoy themselves.

A note for your diary; our next meeting is 26 November, the topic is:-"ALL MY OWN WORK". A chance to demonstrate and explain any personal software!! Why not come down and see us at the usual venue?

A.W.Knights, Kitlands, 57 King's Stone Ave, Steyning, Sussex, BN44 3FJ

MORE ON MINERVA

A couple of months ago my Minnie arrived and I plugged it in, only to remove it again promptly since neither of my regular work horse disks booted up properly! I realised that was probably because they were doing something illegal, but didn't have time to sort them out there and then. A month or so later I found that I had been right, it wasn't Minnies fault at all. As far as my basic boot was concerned a "clever" routine to set my standard windows used the fact that the old ROMs returned 1 for 0^0, while Minnie (mathematically correctly) complains that this is undefined. The problem with my Quill boot was with the set of extensions extbas_code from the library.

These items having been dealt with I find that it is all that it's cracked up to be. I have however discovered some other differences that I have not seen mentioned elsewhere. Jobs are tagged differently from the old ROMs, the first job after BASIC is 1,1 instead of 1,0, and this changes the internal ID too - this doesn't normally matter, but a few job handling extensions use the ID, and this required additional changes to my boot using extbas_code. Speedscreen is incompatible with Minnie's 2 screen mode, since it traps the mode command to deal with the screen mode bug. I did think I could be clever and alter the name in speedscreen to MOAD or something - but it doesn't seem to do it by redefining the command. My only complaint is that the 2 screen MODE is complicated to sort out. It's a pity you cannot put Quill on one screen and have BASIC on the other. Incidentally pressing CTRL + TAB sometimes switches the screens in single screen mode, you can watch the systems variables twinkling! When I first did this I thought the darned thing had crashed again, but you can toggle back to sensibility again.

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POTENTIAL PROJECT - MIDI FOR THE QL?

Having bought a Yamaha PSS480 keyboard with built in MIDI, then I was about to buy the MIRACLE unit when they took it off the market. They tell me this was because they did not find the software they could provide (TRACKER) was sufficient for customers needs. Well this is what a good supplier should do - but left me without a MIDI port.

Now has anyone else got their QL connected up to MIDI?
One way is described in the currently available book 'MIDI PROJECTS' by R.A. Penfold published by Bernard Babini in 1986 ref BP182 at £2.95. This approach - substantially reproduced in Nov 1986 QL World, uses a board plugged into the expansion connector. Whilst this no doubt worked, I have other things like disk interfaces and memory plugged into my single expansion port.

Recently I discovered that the AMIGA doesn't have a MIDI port either, but that various suppliers such as DATEL Electronics offer £25 MIDI interfaces that just plug into the AMIGA serial port. Now the QL has two of those, even if they do have unusual sockets, requiring an adaptor. Once the electrical aspects are sorted out, then all that remains is the sequencer software. Ah but that was the original problem that MIRACLE had wasn't it?
Well, I can see four alternative ways of solving this shortage.

1) Could we track down the original source code of the TRACKER program and improve it - or was the difficulty of doing just that what caused Miracle to leave the MIDI market?

2) I see in the Dec 87 QL World that ESCape software were offering a MIDI program for the QL - or was it their program that got renamed to TRACKER?

3) Both AMIGA and ST have vast public domain libraries. I wonder if among all this material there are any MIDI sequencers with source code. If so then it ought to be feasible for someone conversant with both ST/AMIGA and QL systems to port it over.

4) I have seen at least one book on the subject of 'roll your own MIDI sequencer' which describes the concepts in great detail and offers the complete 'C' source code from the publisher. Again another route perhaps for a competent 'C' programmer.

As you will gather, I own neither an ST nor an AMIGA and I have never written a 'C' program, so I am ill equipped to take this project forward. But I'll gladly buy a program from someone who successfully proves the concept and delivers the goods.

Gerard Phelan, 17 Gunnersbury Court, Bollo Lane, LONDON, W3 8JL
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CONQUEROR Summary User Notes

Introduction
The user manual for the MS-DOS emulator, PC Conqueror supplied by Digital Precision is rather large and perhaps somewhat daunting for the new user. These notes are intended to assist users in grasping the essentials and to give some additional comments based on my personal use.

MS-DOS
MS-DOS is a quite separate operating system from QDOS, and quite different in the way it works. Although MS-DOS version 4.0 and higher are available, I would recommend that users secure a copy of MS-DOS v3.3. The higher versions seemed to introduce more bugs than they fixed, and most people I know are still running with v3.3. It is essential that you get a suitable reference guide to familiarize yourself with the MS-DOS operating environment before trying to run MS-DOS programs.

At a later stage I hope to try running DR-DOS under Conqueror. By all accounts DR-DOS is a much better mousetrap. If you don't already have a copy of MS-DOS, then I would suggest you consider starting in directly with DR-DOS.

Compatibility
Conqueror is not protected and does not make use of any extras. Make a backup copy in the normal way. I have run it under JS and Minerva, on regular QL's with TrumpCard and TKII, and the Lilley board with only 512k RAM, all with and without QRAM. The only problem is that smaller memories do not always leave enough room to run the DOS programs. It should be noted here that many DOS programs are now suffering from the dinosaur syndrome, and have got so big one must run them from hard disk, which I don't as yet have. Obviously to run such programs on the QL one would also need a hard disk as well.

Configure: First run the configure program boot_config. The program is menu driven and quite straightforward. It is particularly important that Conqueror be configured in the first instance to correspond to the physical capacity of your disk drives. In particular, if you have 80t drives, configure as 80t in this initial setup, even if you intend running with 40t disks. This can be adjusted from within Conqueror later (see below). But if you don't run the configure program first, you'll run into trouble doing MS-DOS formats. All the other options can be left at their default setting.

If you have more than two disk drives, you can specify in configure, e.g., that you will use flp3_ and flp4_. I run four drives on the Lilley board, two 3.5's and two 5.25, all 80t 1440 sector. The 5.25's are set as flp3_ and flp4_, and I always run Conqueror and MS-DOS programs from them.

Note that Conqueror only supports up to two disk drives under MS-DOS, A and B, but these can be tied in to any two QL drives. Which drive is called A and which is called B is determined at the time of loading MS-DOS into Conqueror.

Loading Conqueror
LRUN boot, or EXEC_W Conqueror, or get it going in the usual way from inside QRAM. Note that if you are using Minerva, put the following line in the boot program (or type it in from the SuperBasic command channel):

Poke !124!49,128
to enable MS-DOS formatting to work. When you are finished with Conqueror, type
Poke !124!49,0
See p. ERM.4 of the Minerva manual.

Follow the screen prompts to load MS-DOS. Note that you can choose on booting MS-DOS, which drive will become drive A; the other becomes drive B. I find it very convenient to have MS-DOS on an 80t disk, since all of it is then on one disk. MS-DOS on 40t disks occupies two disks and I can never remember which commands are on which disk; having it all on one disk saves hassle.

If you want to read or write files on 40T, then use CTRL SHIFT ALT CAPSLOCK to put the "Supervisor Routine" screen up, and you can change one or both drives to 40t by implementing the "double stepping" option. This simply causes an 80t drive to skip every other track, thus acting like a 40t drive. When changing this option, always also use the Reset Disk Drive option before returning to MS-DOS from the menu. A number of other system setup parameters can also be changed from the menu. They are all pretty much self explanatory.

Memory
MS-DOS can only use a maximum of 667k, so people with TrumpCard will have about 190k spare for other tasks. Those with less memory and/or making more multi-tasking demands on their machine will need to change the memory allocation in Conqueror, either through the Config program or using the prompt on the startup screen, to something smaller. The default is to allocate the whole of 667k (or all memory if your total memory is less than this). Conqueror plus MS-DOS together need about 105k. Then you will need additional space for whatever program you're going to run (e.g. Wordstar or Multimate), plus whatever work space that program needs. DP's recommendation for minimum memory allocation of 240k to 350k seems about right.

Formatting
If you are copying one disk to another with diskcopy, then preformatting of the target disk is not necessary. However, under MS-DOS diskcopy only works with identical disk formats. If you are copying between 40t and 80t, then you will have to preformat the target disk and use one of the other MS-DOS copying commands.

Note that Multi-Discover needs a preformatted MS-DOS disk to copy to, whether from a QDOS file or from another PC compatible file. Using Conqueror to do the preformatting is a convenient way of getting around this. Multi-Discover can be a very convenient way of copying selected directories or selected files from one DOS disk to another. Diskcopy under Conqueror is pretty fast, but I have the impression that Multi-Discover is often faster and more convenient to use than working with the available DOS commands and Conqueror in other copy situations.

Formatting to 40t on 80t drives can create problems in reading the files on "normal" 40t drives. The formatting process used by Conqueror preformats in QDOS(!) on all 80 tracks. This generates "noise" between the 40 good tracks which can cause some 40t drives to generate the bad or changed medium message when they try to read such a disk. If you have switchable 40t/80t drives, then changing by switching should be OK. If you're planning to do a lot of copying to 40t disks and have only an 80t drive, then I'd suggest you use a friend's PC to format a box or two to 40t on his standard 40t drive. There's no problem reading 40t disks on 80t drives using the double stepping option.

Customizing Screen Handling
Conqueror sets up two separate jobs, one for screen handling, and another for everything else. DP claim that their allocation of priorities between:
(a) Idle priority in graphics mode
(b) Idle priority in text mode
(c) Search priority after BIOS calls
are optimized for best overall performance on average, but changing these priorities can result in significant speed increase in particular situations. For most of my work I find that increasing the text priority helps a lot, if only psychologically, since I find the delayed reaction of the screen quite annoying. But as DP say, experiment with the values of the screen priorities until they suit you.

Serial Ports
The default settings are ser1 assigned to MS-DOS printer, and ser2 to MS-DOS comms. If you have configured for your printer to go to QL PAR device, then comms is switched to ser1.

Under Conqueror, setting the baud rate sets the same rate for both serial ports. Thus if your printer is set to 9600, then any comms traffic will also have to go at 9600. The following BAUD rates are possible (they are the only ones common to both QL and MS-DOS):

300, 600, 1200, 2400, 4800, 9600

Graphics
Conqueror supports CGA 4 and 5, but not the blink feature, and runs in QL MODE 4, so that only 4 colours are supported. It automatically ensures that background and print are different colours. Blink is not supported.

Timing
Some programs appear to "hang" when loaded under Conqueror. Be patient. I've got one program that takes more than ten minutes to get itself moving. Sometimes it pays to go back to the Supervisor Screen and set Timer Interrupts Enabled, as some programs expect this.

Keyboard Configuration
Just as MS-DOS is quite different from QDOS, so too are the codes generated by the keyboards under each operating system.

This means that the control codes and so forth required by a particular PC/MS-DOS application program will not in general be generated by exactly the same key combination on the QL. A translation table is unavoidable, if awkward to use. Conqueror comes with a default translation table which can be printed out from the Supervisor Screen menu. Do so at the first opportunity. Remember that there are 256 lines to the printout - four or five pages depending on your page length and spacing. Conqueror also has the facility to design your own translation table if you should like to do so, but I must say that I have not found it necessary to do so. Unless you have a PC/MS-DOS program which requires keypresses not provided for in the default mapping table, I'd suggest leave well enough alone as sorting out IBM key codes, and matching them to a new set of QL keypresses can turn out to be a long tedious business.

Note that certain QL key presses are trapped by QDOS before getting to Conqueror and are not available for remapping, e.g. CTRL/F5 (freeze screen); other keypresses are dedicated to either Conqueror or (possibly) your head end program and would also not be available for remapping.

Eggert Peterson, PO Box 33012, Isa Town, Bahrain
29.8.90

A STAR IS BORN?

Although a QL owner since its' faltering launch I remain in many respects a computer tyro. Consequently this note will educate few but may encourage more to contribute to the newsletter.

Being a sucker for new gadgets I was easily lured into the world of home computers. First came the Dragon with its' 32K memory although I was tempted by the 48K Lynx. Having struggled with a dearth of software and storage on audio cassettes the QL with its' mammoth 128K, built in microdrives and all the software I would ever need was an essential.

Even now I think the elegant lines and black livery of Sir Cives' machine are micro haute couture, although I cast covetous glances at Psions' mobile computer every time I pass Dixons. The intellectual reason for my purchase was a desire to force upon myself a discipline in thinking and planning which the uncompromisingly stupid microchip demands of all programmers. My early efforts were strewn with frustration. I was even mystified by Abacus at times. Those early enquiries that I sent to Psion however yielded an unexpected dividend.

When the ITV Database team devoted a programme to the QL and in particular Psion who had won the award for the best bundled software of the year, I was asked if I would take part and demonstrate how I used my Abacus software. So in front of a handful of nightowl viewers I made my TV debut.

Those were heady days of hope before we had to swallow the Sugar-coated bitter pill that the Quantum Leap had been into oblivion. But there must still be hope. I read that the C5 is about to break a land speed record and that machines are changing hands for £2000.

Computer buffs share with hi-fi enthusiasts an irresistible urge to upgrade hardware and software irrespective of need. I now have two QLs (yes one of those £99 bargains), two sets of disk drives, Trump Card, ICE, Lightning, two printers and more. Yet still I scour the ads in QL World for the latest innovation. How I have justified it all to my wife is a mystery but have you ever seen the persistent enthusiasm with which children sell the need for an ice cream?

Now five years on, or is it six, time flies when you're at keyboard and screen, I regret that Sir Clive has not got the reward and acclaim that is his due for the QL. I use a PC at work which cannot multi-task yet with that MS-dinosloth operating system has conquered the world.

My thinking is more disciplined. I get great and still growing satisfaction from programming in Archive. [By the by I hear from Transform that someone is rewriting Archive for PCFour/Exchange - we should encourage them to consider porting it to the QL]. My next call to the other small screen is still awaited and I shall continue to snatch QL World and Quanta, of course from the doormat.

Neil Crighton, 562 Ben Jonson House, Barbican, London, EC2Y 8DL
Tel: (071) 638 8122
24.8.90

TWO MINUTE TIP

Have you ever produced a masterly spreadsheet, then had a frustrating time trying to centre the various text headings because Abacus will not accept leading spaces? Leap to the Install program and use one of the Translate facilities to change a character unlikely to be used in Abacus (I use '^') into a Space. You can then pad the text with both leading and trailing spaces, and position it just where you want it.

Did I say two minutes? Why not compile Install_bas - make it a joy not a chore!

Peter Jones, Shirralee, Dean, Shepton Mallet, BA4 4SA
Tel: (0749) 88465

BOOKS WITHOUT WHICH I HAVE LEARNED TO LIVE

My dear wife was feeling a bit "down" this morning. I had no work so I intended to spend an hour or two in the spare bedroom "playing with the computer" as she so aptly puts it. In the event I thought I'd spend some time with her as she seemed to need a lift.

I told her that I would not swap her, even for a disk drive. No greater love hath any man. I also advised her to count her blessings, by now she was feeling a bit better and replied with a smile "What blessings?". My reply was that for starters she was married to me. For some reason this did not lift her spirits further....

I could write a book about how I love this woman. I could write a book about how she always has an answer to everything. Which brings me to the point of all this which is, erm, books.

The first computer-related book that I ever bought was something by someone called Barden and purported to tell the reader how to build a computer. It had received a glowing review in a magazine (I later learned to avoid like the plague anything that the reviewers praised but I'll write about that some other time.). I went into a very large bookshop in Derby (where I then lived) and asked the assistant to get me a copy. She tapped away at the computer which impressed me no end until she informed me that the book was not "on the computer" and she could not, therefore, order it. More in anger than in anticipation I entered a small shop which sold only religious texts, a few doors away. Four days later I was hurrying homeward with the book firmly clasped in my hand. What a pity that the book was a waste of time, effort and money. The computer it described was a pathetic little thing. I never did build it. The book was American - 'nuff said?.

The next, and almost last, book I bought was the "ZX81 Pocket Book". It turned out to be full of silly little games. One I remember involved getting someone to blindfold you. You then had to try to put a tail on a donkey. I did not type it in, I didn't think I could take so much excitement. However, I was grateful to the author, the book contained a rather silly little adventure but the driver program introduced me to the concept of condition/action tables and status tables. Up until then I had been writing things like IF location=10 and flag1=5 and flag2=7 and flag3<>0 THEN..... It was difficult in the extreme to write a halfway decent adventure that way.

Then I received one Christmas "50 Rip-Roaring Games For The ZX80 and ZX81". It was diabolical. All those involved in it should have been strapped into chairs, fitted with headphones and forced to listen to Cilla Black. I still have this epic and browse occasionally when I need a laugh. One of the contributors later had published in a magazine a program which drew some lines radiating from a central point but wait, this was for a Spectrum and the lines were coloured!. If you can believe it there's more, the lines were curved! This person later still became the editor of a magazine. I'll spare the author's blushes by not mentioning his name (in case of the unlikely event that he feels any shame!) because he's still around.

Two books on Z80 machine code followed. One, written by a woman I think, was obviously aimed at precocious four year olds whom I now know make up 99.9% of the computing population (QL Users excepted!).

The other did not tell me anything that I hadn't learned from studying the odd machine code program. I never did find the difference between ret and reti on the Z80 though I would hazard a guess that it has something to do with restoring or not restoring register values.

I acquired several more books as prezzies but I won't bore you with the sorry details. I'll simply say that the next time a new home computer is introduced I will be among the first to buy it. Then I will quickly copy the instruction book and publish it under some such title as "Getting Further Into Your Two-bit Acme Super". I'm going to be rich and people (well some at least) will think of me as an expert!.

The only really useful book that I acquired for the Spectrum was "The Complete Spectrum ROM Disassembly". It proved an excellent purchase.

When I acquired my QL I managed to find a useful book: Andrew Pennel's QDOS Companion. It is a mine of information but having said that it leaves a lot of unanswered questions. I have mentioned "Advanced(?) Machine Code" in a previous issue.

The point of all the foregoing is that I still have a desire to build a computer myself but what book(s) do I buy in order to get the necessary information?. Basically I need circuit diagrams and some info on RAM refreshing, address decoding etc.. I have pored through book lists but one cannot be sure about their usefulness. I have spent more than enough money on useless items written by the less-than-knowledgeable. Living as I do in deepest Lincolnshire, quite a distance from the English border, I cannot browse before buying but have to order.

If anyone can suggest a book that will furnish the info I need I will be very grateful. Oh, it's the 68000 family that interests me.

I also need "The Complete Forth" which is, sadly, out of print, or any good guide to Forth. I am willing to pay the cover price if anyone has such a book which they no longer need.

Before I came upstairs to write this I vacuumed the lounge-(no, I didn't Hoover it - perhaps I Goblined it). As I am "on top" of my work at the moment I help out around the house a bit in return for being well fed, comforted and amused. I found that the cleaner was picking up much better than it ever has. The slightly-bent bit had broken a few days ago. As a temporary repair I had taped it on to the straight bit. Yesterday we called into a shop to obtain a replacement. I had great difficulty in making the man understand what I required until at last the penny dropped. "If you mean the elbow (slightly- bent bit)" he said, "It should be at the top end, not the bottom." My wife was quick to point out that it was I who had assembled the thing last year when we bought it - she enjoyed that!. Have you ever left a shop by walking upright under the door?.

One last question which has nothing at all to do with computing. What the heck is a Roe Zunda???? Barbra Streisand sings about one- "Like a Roe Zunda the April snow."

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ATARI MEGA AND A BROTHER HR15 PRINTER

At the beginning of June I purchased the Mega2 ST and tried to convert my QL disks to work on the new system (The level B14 drivers from Tony). Most things worked but I had certain problems with Basic and could not make my printer work. Eventually I rang Brother and was advised that a ready made lead could be obtained from Connexions in Welham Green. The plastic was flashed and I sped home along the M25. I plugged it in and bingo, it did not work!! It was a case of ***'s Law as by then my old equipment was out of action. The monitor had blown the 8301 chips in both my JM and JS machines.

Well the workshop at Thetford was coming up so the printer was put in the car in the hope that help could be found. Phil Borman and Tony Firshman had a fiddle with it and eventually the printer burst into life. Thanks to you both for your efforts. It seemed that the ready made lead required extra connections. Before leaving the workshop the printer seemed to work when the wiring was :

Atari pin	Brother pin
2 (Transmitted data)	3 (Received data)
3 (Received data)	2 (Transmitted data)
5 (CTS)	20 (DTR)
7 (Signal GND)	7 (Signal GND)
20 (DTR)	5 (CTS)

with pins 4 (Request to send), 6 (Data set ready) and 8 (Received line signal ready) linked at the Brother end.

Back home along the M11 and the gear was reassembled as I had a large Quill doc to be printed. Needless to say it did not work. At the top of page two the letter got mixed up totally. Much cursing as a 20 page report takes a long time to print 1 page at a time!

Various attempts failed to produce anything longer than a page. Then the Level C11 EPROM arrived from Jochen (HM Customs opened the package and charged VAT) and the heat was on to get the machine working for itself.

The solution for me was to cut the connection between Atari pin 20 and the Brother 5 and to join the Brother pin 5 to the linked 4, 6 and 8 pins. Perhaps a printer expert can explain why this works. All I can say is that it works for my Atari and my Brother HR15.

Now for that Level C11 EPROM. The clever little beast auto boots the Atari for me into a QL. On pressing the F1 key the familiar red and white screen appears. Drives whirr and after about six seconds a cursor appears. At that point TK2 is active and a host of additional goodies available. No extra Atari disks, no double clicking in GEM just on with a normal boot program. Being based on a JS ROM it is possible to put all ones eggs in one boot program. My normal work boot therefore loads Lightning, sets ALTkeys, loads QLoad, loads FlashBack SE, loads SpellBound SE and finally TaskMaster.

I have found slight problems and have reported them to Jochen. If you type ahead of the initial cursor appearing you may believe that the keyboard has not been activated as nothing appears in #0. It is however, because if you load a basic program and use the TK2 'ED' command you will see what you typed at the start of the first line. Not a big problem, just something to watch out for.

The version C11 EPROM has TK2 version 2.??. This contains a subtle change from the earlier version included in my TrumpCard and Version B14 driver. The rules about deleting lines from a basic program in ED have changed. In the new version to delete a line you cannot remove a whole line by just removing all traces of it. Although it goes from the screen and the lines close up if you save the edited program the line will still be there. Tony has made ED now like the QL and you can only delete the line by leaving the line number present.

As an alternative you may now use the <CTRL>+<ALT>+<LEFT ARROW> key combination to delete the line. Again not a real problem as long as you are aware of it.

The Basic problems I have encountered concerns the use of the FORMAT and COPY commands. I had a basic program on an ALTkey to copy Archive screens into ram. There were 10 lines of the general type:

```
COPY_O Flp2_file_scr,Raml_file_scr
```

It seemed not to cope with this, especially in the TaskMaster environment. The 'cure' to the problem was to add a PAUSE 10 to the end of each line. Too fast for its own good perhaps.

My problem with FORMAT was that I could not format a disk and immediately copy data onto it. For example a master disk that formatted the disk and then copied the working copy onto it just complained and said 'format failed'. To check this out a file was copied into ram and then the following line of basic typed in:

```
FORMAT Flp1_test:COPY raml_file,Flp1_file
```

Under TaskMaster this would fail every time. The cure is to put a PAUSE 10 before the COPY command.

Jochen tells me that other users have spotted the Format problem and he is going to get the problem sorted out as soon as Tony gets up and running in France. In the meantime it is easy to put in a PAUSE 10 to get round the problem till the formal fix arrives.

I must say that despite the above minor problems I am delighted with the EPROM and the Atari. Tasks that seemed to take forever are now done in a fraction of the time.

Alfred Kendall, 22 Langley Hill, Kings Langley, Herts WD4 9HD
27.8.90

A USE FOR MINNIE's SECOND SCREEN

I thought I would do my bit and submit something useful _ Oh, all right, interesting, then _ to do with Minerva's second screen.

It requires TK2, the built-in version, and Minerva's own Trace to be activated. Although if you don't like TK2 _ it's a perverse world and I expect there is someone _ Simon Goodwin's DIY PARNAME$, QL World Nov. 88, does just as well as Mr. Tebby's PARNAM$ for Lines 10 & 11 of the listing.

Listing 1 sets up the 'other' screen invisibly with channels for WHEN ERRor and TRACE. TRACE switched on at Line 15 has the merit that it doesn't interfere with the visible screen and, for a very long trace, the earlier stuff simply scrolls off the top. Well, how much of it did you want to wade through ?

Listing 2 substitutes for your own troublesome program and it has a contrived fault. There are no prizes for finding this, with all the help I am going to give you !

Now to the WHEN ERRor clause. PARNAM$ and PARNAME$, each belongs to a small suite of PAR functions. All the others insist you supply the parameter name, generally from the DEFine PROCedure (or FuNction) program line, but these two are different - only requiring 1,2..,n etc. as the first, second or nth parameter from there, i.e. you don't have to know the name. More than that, the system isn't bothered if you ask for more parameters than the Proc or Fn has, or for some that don't have names because they were supplied just as numbers. So that these two can have general application in WHEN ERRor no matter where the program faults within any Proc/Fn. In the limit one can ask for nine which is all a Proc/Fn can carry, anyway.

As written, the program returns
'1,tom 2, 3,dick 4,harry$ 5, 6, '
available to see, along with the TRACE, by pressing CTRL & TAB together. These were the calling names to TRY from line 1010, and being pedantic No.2 wasn't a name, No.5 & No.6 didn't exist. Keying CTRL/TAB again returns to the unspoilt default screen.

Does it work? Well, it does, I'm no expert on why. The word is that LOCals don't exist outside the routine, and those bracketed in the DEFine line are always LOCal. It would seem that through WHEN ERRor we have left, but not quit, the routine. LOCals are available as they wouldn't be if normal error handling returned to the keyboard, possibly because QDOS tidies up by closing the routine before doing so.

Now if you would be so kind as to bodge in the lines from listing 3, you can run the program showing that LOCals are indeed available. At first sight that doesn't seem to be much of an advantage since one would have to know where the program faults and the names of LOCals there. Yet it can be much tidier than interfering with a routine before understanding what is wrong, less bother than having to work out where to ask for values printed out. And perhaps most interestingly, those values from WHEN ERRor are at the instant of failure _ which can't be bad.

Please don't consult me about Minerva MODEs. I don't understand them, those used were arrived at by trial and error and patience.

Listing 1

```
1 REMark TK2_EXT
2 MODE 96,-1
3 OPEN#14,con_512x34a0x0
4 OPEN#13,con_512x104a0x34
5 PAPER#14,1:INK#14,7:BORDER#14,2,2:CLS#14
6 PAPER#13,4:INK#13,0:BORDER#13,2,2:CLS#13
7 MODE -16384+128+1,-1:PRINT#0,"CTRL/TAB to see other screen,
  when numbers stop."
8 WHEN ERRor
9 TROFF: MODE 65,-1
10 PRINT#14,'1,'!PARNAM$(1),,'2,'!PARNAM$(2),,'3,'!PARNAM$(3),,
11 PRINT#14,'4,'!PARNAM$(4),,'5,'!PARNAM$(5),,'6,'!PARNAM$(6)
12 :
13 :
14 END WHEN
15 TRON#13
```

Listing 2

```
1000 tom=10:dick%=4:harry$="Fred"
1010 try tom,5,dick,harry$
1020 DEFine PROCedure try(a,b,c,d)
1030 s=a
1040 REPeat loop
1050 s=s+b:PRINT s,
1060 if s>500:EXIT loop
1070 END REPeat loop
1080 s=s+c
1090 END DEFine
```

```
    Listing 3
12 PRINT#14,e,f%,g$

1021 LOCal e,f%,g$
1022 e=7:f%=0:g$='Emily': REMark Fred's sister
1023 t=a DIV f%: PRINT a;" DIV ";f%;'=';t
1024 STOP
```

Phil Parry, 9 Alexandra Road, Morecambe, Lancs. LA3 1TH
22.7.90

WORD-WRAP YET AGAIN

Right, for those of you who don't yet have it, enclosed is a SuperBASIC word-wrap routine and demo listing. For those who have earlier versions, there was a bug, and I have squashed it. The bug related to strings which ended with a space character, and it shouldn't be hard to spot the extra line that has been added. I will mention the history of this routine, as it may help some members to further appreciate what an excellent idea joining Quanta was, for me at least.

I submitted the original word-wrap in time to appear in the May 1989 Quanta, and a very positive response came through my letter-box within days. A few people had problems, due both to typing errors and problems with the print in their copies of Quanta, but soon things went quiet again. To blow the calm away, another Quanta member, Dr Stephen Meech, sent me another version, much faster than my own, which, in slightly modified form, I sent in again. The newer version appeared in the August, 1989 Quanta, and until recently has been in constant use without problems.

Testing a program a few weeks ago, however, I discovered that if a string to be wrapped ended in a space character, then the routine would crash. Having traced the bug, I present what I hope is the final version of the general-purpose word wrap. The listing is labelled "Listing W1", and was printed on my slow but wonderful JUKI 6100 daisywheel printer. The demo lines, for the unbeliever, are in the listing labelled "W2".

This routine is, obviously, now a joint effort of myself and Dr. Meech; it is a good example of what user-groups are for, too, as the exchange of information via the Quanta magazine made it possible. The routine can be used by anybody, and works in any mode on a QL, with any WINDOW size and any CSIZE, as long as the WINDOW is actually big enough to print two lines of text. Using it with one line is possible, but seems rather pointless...
M. D. Knight.

Listing W1

```
32000 DEFine PROCedure Wrap(Ch,p$)
32001   LOCal First,SpaceFound,Loop
32002   First=1
32003   IF LEN(p$)=0THEN RETurn
32004   REPeat Loop
32005     IF First>LEN(p$)THEN RETurn
32006     SpaceFound=" "INSTR(p$(First TO))
32007     IF SpaceFound>0THEN
32008       PRINT#Ch;!p$(First TO First+SpaceFound-2);
32009       First=First+SpaceFound
32010     ELSE
32011       PRINT#Ch;!p$(First TO);
32012       RETurn
32013     END IF
32014   END REPeat Loop
32015 END DEFine Wrap
32016 :
```

Listing W2

```
100 MODE 4
110 WINDOW 244,198,234,20
120 WINDOW#2;204,198,29,20
130 WINDOW#0;450,34,29,220
140 FOR n=0TO 2
150   BORDER#n;2,2
160   INK#n;7
170   PAPER#n;0
180   CLS#n
190   CSIZE#n;0,0
200 END FOR n
210 Demo$="This is a long, almost pointless string to demonstrate
    word-wrapping on the QL."

220 Wrap 0,Demo$
230 Wrap 1,Demo$
240 Wrap 2,Demo$
250 CSIZE#2;1,0
260 PRINT#2;\\
270 Wrap 2,Demo$
280 PRINT\\
290 CSIZE 2,0
300 Wrap 1,"Good, isn't it? You can wrap any string to any valid QL WINDOW,
    as long as there is actually room for the current CSIZE."

310 STOP
320 :
```

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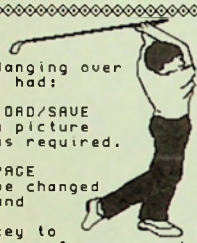
ODDS AND ENDS(continued)



Hanging over from my examination of the 'Files' menu last month I had:

LOAD/SAVE a picture as required.

CUT BUFFER - The cut buffer is a means of holding (piece of clip art) in memory to be held and used

PAGE be changed and

POSITION - In various modes the page position can by the use of the cursors but this is often a slow tedious job if you are doing it frequently. The selection of 'Page Position' will allow the 'Alt' key to be used along with the cursor keys to provide fast moves from one end of a page to the other.

CONFIGURE: Will allow changes to be made as required, to:

-BAUD RATE	-DEFAULT PAGE	-DEFAULT HIRES FONT
-PRINTER DEVICE	-DEFAULT TEXT FONT	-DEFAULT PATTERN FILE
-NETWORK STATION	-DEFAULT TEXT FILE	-DEFAULT SCREEN
-DEFAULT DRIVE		-DEFAULT CUT FILE

LOAD PATTERNS: The program offers 37 different designs, each of which can be divided into 9 sections and used separately as borders to pages or sections of pages. The available alternatives thus number 333. Loading is carried out from the 'Graphics' section of the Main Menu, and 'LOAD PATTERNS' will put the design into memory while 'PATTERN BRUSH' will enable you to use CTRL with a cursor to place the design on screen as required.

RETURN: As always, the option returns to the previous menu & allows us to move on to the:

ERASER Menu

ERASER: can be toggled by the 'Space' bar between MOVE & ERASE. The size of the Eraser cursor can also be changed by the use of CTRL and a cursor between filling the entire screen down to the size of a single pixel.

PAGE Menu

PAGE: Selection of this option allows for several choices concerning the page, i.e:
PAGE POSITION: To move page as required for input/editing of material.
WIPE THIS PAGE: Rapid & total deletion of the page.
NEW PAGE(S): New pages will be set up at length/width previously arranged.
LOAD NEW PAGE: Gives option for new page at new measurements.
MERGE PAGE: To merge with an existing page in self-selected position.
SAVE PAGE: Normal SAVE procedure with compression or not.
PREVIEW PAGE: An opportunity to 'View Page' before printing.
COPY PAGE: Straightforward COPY procedure.
RETURN: To previous menu.

If you have any problems please write to me c/o the Quanta magazine Editor.

Bob Gingell

FINDING PROCEDURES

Readers who also take "QL WORLD" (who doesn't?) will have seen the article by Gavin Monk in the June issue, which includes a very useful routine to find the start line number of any named PROCedure or FuNction by adding a function 'LDEF' to the commands available. This is excellent but, unfortunately, does not appear to work (for me anyway) with Superbasic programs over about 20k in length, producing a "Not found" error instead. If anyone else has the same problem, it may be cured by amending A2.W to A2.L in lines 53 and 74.

With Superbasic programs written long ago however, I have usually forgotten the names of procedures I originally allocated which doesn't help! It defeats the object of 'LDEF" to find them by listing the whole program, so I have written a short (284 bytes) complementary routine 'PLIST', which will print in tabular form both the start line numbers and the names of all PROCedures. FuNctions are identified by the suffix '*'. Channels 1 and 2 are normally unaltered when programming and, by using these, up to 72 names and numbers may be listed in the order in which they are called, and viewed simultaneously (2 columns of 18 lines per channel). I think this is enough for most purposes, although my longest program uses 63.

I am sure this has been devised before, but it was an interesting exercise in the process of coming to terms with assembly language!

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A REPLY TO SOME THOUGHTS ON A QL REPLACEMENT

Having awaited for many years for a reasonably cheap QL successor to arrive in a stable form, it appears we could soon have the choice of machines. That is if Miracle go ahead and Leon Heller is able to assemble his chips. (They are Philips chips and Philips computer operations are in trouble before we start!).

What worries me is that there does not yet seem to be a graphics standard emerging for a high resolution upgrade machine. Pixels square? and screen size of 768 x 1120, EGA (480 x 640), VGA (600 x 800), CGA, 512 x 680, 1024 x 780, or whatever. Surely it is time that Quanta and other European QL groups paid for the potential manufacturers, Firmware and Software suppliers to sit around a table with Tony Tebby to thrash out a common theme?

Leon Heller mentioned in his July 1990, page 11 Quanta article that his machine would need a properly designed expansion bus. I would like to put forward the suggestion that this should be a VME compatible bus. The VME system is used in industrial control applications and is now being used in many Scientific Instruments e.g. Oscilloscopes (We use it extensively at Culham Lab, AEA Technology, Abingdon).

The operating system generally run is OS9, which I believe was at one time available through Cumana for the QL (does anyone have a copy?). Les Coveney made his feelings known on this operating system (Quanta August 1989 p21). If it is true that Minerva is now free of the Amstrad copyright, then I would welcome the possibility of having QDOS and SuperBasic as the control environment on a VME system. It is also just about the only chance there will be to expand the QL sphere of influence. It is not yet too late.

How about it Leon? At two hundred pounds for a board you would be one fifth of the baseline price of the present 16 bit 68000 based control computers! And how about Quanta supporting the initial design stages of the project financially?
{I think Dennis answers Quanta's position on supporting these projects in his Dennis Briggs Jottings in the October magazine. SJ}
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QL IDEAS NOTEBOOK

I have just enjoyed browsing through August Quanta for the second time. I usually find some particularly interesting articles, some are way beyond my comprehension, and some make me think 'how come he didn't know that'. Which proves that contributors range from beginners to super experts. So the thought entered my head to write about some items which I have noted in my "QL Ideas" notebook related to using BASIC. They were obtained from Quanta or QL World and may be interesting to various levels of QL Users.

1. "copy flpl_xxx to serl" works if you have a printer connected. It can be mdv instead of flp, and scr can replace serl. "save serl" will send a program in memory to your printer.

2. "open#3,serl:dir#3,flpl_:close#3" to print a directory.

3. There is a program (CAT?) somewhere in the library which puts the whole directory on the screen without scrolling. I have it in my boot program. CAT is more comfortable to use than DIR if there are many files in the directory. Of course you are even better off with QPAC2. Also appears in QL World Oct.88 p34 using pipes (see mention in 9. below).

4. To arrange for a basic file to list automatically when LOADed, proceed as follows: With the file already in memory do "open_new#3,flpl_xxx:print#3,'list':list#3:close#3" Now when you load flpl_xxx it will LIST. (The file then contains LIST without a line number before the basic program). Other commands may be used instead of LIST.

5. "copy con_ to serl" then the keyboard is connected directly to your printer and you can use your QL like a typewriter except you do not see on the screen what you type and you cannot correct.
"copy con_ to flpl_xxx" will type characters direct into a new file, but end with CTRL/space or you will have problems. (see Quanta Oct.89 p9).

6. A better way -
```
100 open#3,serl
110 repeat loop
120   input '? ';a$:rem type a line then ENTER
130   if a$='':exit loop
140   print#3,a$
150 end repeat loop
160 close#3
```

7. Easy edit of a BASIC program. Do "edit n" for editing line n. When editing is complete do not use ENTER but DOWN ARROW. This moves you to the next line which you can now edit - and so on. When you have finished editing then use ENTER to finish.

8. To save the screen "sbytes flpl_s,131072,32768"
   To load a saved screen "lbytes flpl_s,131072

9. In QL World Oct.88 is a program which allows you to use pipes. Pipes can be useful, for example in a program to search for a character string in a BASIC program. See next item.

10. The following slightly clumsy program requires RAM drives which you get with QRAM and allows you to search for a character string in a BASIC program. Using a pipe would be more elegant. The problem is that LIST will only send to a channel.
```
  1 DEFine PROCedure bsearch(t$)
  2 CLOSE#4:CLOSE#5:DELETE raml_aa: REM you may not need this line
  3 FORMAT raml_0:FORMAT raml_100: REM raml_0 may not be needed
  4 OPEN_NEW#4,raml_aa
  5 PRINT "this program ends if there is a gap in numbering between the
start number and the end of the program being searched"
  6 INPUT "if start=100 and step=10 press y ";y$
  7 IF y$=='y':f=100:l=2000:S=10:ELSE S=0
  8 IF S=0:INPUT 'first line ';f,'last line';l,'step';S
  9 FOR I=f TO l STEP S
 10     LIST #4,I
 11     CLOSE#4:OPEN_IN#5,raml_aa
 12     INPUT#5,a$
 13     IF t$ INSTR a$:PRINT "found  ";a$
 14     CLOSE#5
 15     DELETE raml_aa:OPEN_NEW#4,raml_aa
 16 END FOR I
```
Merge this with your program, then do "bsearch 'string'

11. I have a program to compare two directories or two lists. Too long to print here but anyone who would like it can ask me for it.

12. In Quanta Jan.90 is a program to rename a Disk. If you have RENAME as a command (from SuperToolkit II or other source) then "rename flp1_xxx,flp1_yyy) renames a FILE _xxx to become _yyy.

13. To read characters in a file: or read strings from a file:

```
100 open_in#5,file_name
110 repeat this
120   Print inkey$(#5);   replace 120 by input#5,a$:print a$
130 end repeat this
140 close#5
```

14. An excellent program to translate characters for your printer is called TRA1_bas it was on DISK-12 now UTIL_GEN_2 of the Library. You can translate any code by 1 or 3 codes. Its only weakness is that you cannot find out later what you have arranged to translate unless you are very clever. So keep a note.

15. If you want to read the HEADER of a file, see QL World Feb.88. With this you could change the value of items in the header, but do it with care and knowledge!

16. Simon Goodwin in QL World March.90 shows how to have several basic programs easily available. You must be careful not to "UNLOAD xxx" where xxx is a name known to your QL else it CRASHES you might have to switch off and wait some minutes!. MINERVA now has a multi-BASIC feature, mine (1.66) does not. I find multi-basic useful because I can quickly get my BOOT program back when I want to run part of it. No doubt there are other arguments for multi_basic.

17. You want to include in your Quill document a BASIC program without re-typing it - load it into memory and save it with the name extension _lis, (example flp1_xxx becomes flp1_xxx_lis). Now load Quill and import your _lis file. That avoids errors in re-typing. I only found that out while preparing this letter!

I will say some more about Quill and Abacus, and maybe Qpac2, another time.

Bravo to Quanta producers and contributors and the firms which keep producing exciting goodies for the QL.

Ian Pizer, 49 Ch.Machery, 1292 Chambesy, Geneva, Switzerland.
16.8.90

SUBDIRECTORIES

The microdrive-based QDOS had no subdirectory facilities. This changed when Supertoolkit 2 arrived. The directory structure is not what the rest of computer world would call 'subdirectory', but it works fine. But nobody uses them. WHY? Simply, they can not be used because nobody uses them.

If I buy a prog or get some PD software the boot file normally starts with:

```
lbytes flp1_whatever,somewhere
exec  flp1_the_rest
```

If I want to start the prog from flp2_Games_ or ram1_ or win2_ (sometimes massive) changes must be done manually. As surely all QL-users with disk drives own TK2, wouldn't it be easier to write:

```
data_use flp1_
lbytes whatever,somewhere   and so on ?
```

Even worse are machine code programs. Did you ever try to convince Quill to save to flp2_LETTERS_PRIVATE_ ?
Unfortunately the command flp_use is no help. Did anyone rewrite this command to accept "flp1_Letters_" ?

What I am looking for is a command like "_CD" included in the Rebel Hard disk (Terry Harman Quanta 12/89)

REAL SUBDIRECTORIES FOR THE ATARI-QL
I just received the new device driver for my AQL (V. C-08), including REAL subdirectories. MAKE_DIR "flp1_Letters" creates a file ->Letters, holding the directory data of all files beginning with the word "Letters_".

Very useful, that's what I was waiting for to get a little more overview to my crowded directories- but I have no access to these files from my trusty old QL! I hope the extended floppy driver will be available for "ordinary" QL's soon.

Another rarely used feature of the QL is the QJUMP's POINTER SYSTEM. It is far beyond GEM or WINDOWS (try to play 2 of WINDOWS' Reversi at the same time, and you can see how slow multi-tasking can be on a 286-16 bit ! machine) and it is easy to use with mouse and from keyboard ! (Ever tried to use GEM without mouse ?) There are a lot of small utilities around using the Pointer Interface, but there is only 1 "real" prog I know using it: the QD editor (my famous one) by Jochen Merz.

Many people bought an Atari just because of the easy-to-use powerful SIGNUM word processor. The pointer system is much better than GEM but I do not wonder any longer why the QL is going down if good programs like - say - Desktop Publisher or Text87 refuse to use the power we have.

TEXT 87
Most word processors print text on the screen and try to get the result as near as possible to paper. Text87 goes the other way round, first aim is the printout and not so much the representation on screen. To get a WYSIWYG representation on screen you have to attach screen fonts to represent your printer typeface (feature). Most printers use at least typefaces of:

10 cpi = 80 chrs/line on A4 paper (PICA)
12 cpi = 96 chrs/line (ELITE)
17 cpi =136 chrs/line (CONDENSED)
and same typefaces double width and/or double height (5/6/8 cpi), italics, sub/superscripts.

To represent 10 cpi (the "normal" typeface) I use QL10, the "normal" QL chr set I am used to. If the video scale is set to 60 pixels to represent 1 inch of paper, this fits perfectly, 80 chrs represent 1 line A4 paper without margins. 12 cpi is represented by Default 11 with the same good results. First problems arise with 17 cpi : the smallest font supplied, Antiqua8, is only 13 "chrs/per screen inch". Of cause, Text87 cares about this but it looks a little strange. Another problem: All small fonts supplied -Antiqua8, Sub/Superscript-miss chrs > 127 !

Since last Xmas I have owned a NEC P 2200 24 pin printer with 4 different 10 cpi fonts. As the character sets differ a little (NEC/IBM set) I'd like to use them mixed. But all the screen fonts Text87 supplies except the above mentioned are big ones, which can only be used to represent enlarged printer fonts. As I don't want to re-invent the wheel - has anybody created a set of small, usable fonts ?

I will give some more comments on Text87 as soon as I have received V 3.0; I am now still using V 2.01.

Armin Dietrich, Heidebergstr. 10, D-6483 Bad Soden-Salm. 5

PROFESSIONAL PUBLISHER IMAGE TARNISHED

I have seen quite a few articles on the subject of using the Digital Precision program Professional Publisher recently, mostly in QL World, and I have not been very impressed. I will admit to a great enthusiasm for this program, and even to a small commercial interest, (of which more later), but allowing for both of these, I think I am still being fair when I say that those writing some of the reviews have not done them very well. I enclose a sample Professional Publisher page, produced on a 9-pin printer, on poor quality paper, and with only two passes of the printhead on a fairly well-used ribbon; this page took me minutes, literally, to produce. To see the page in a recent QL World article, produced in five hours, stunned me, as I now never take more than half-an-hour to produce even the most elaborate page with Professional Publisher. Perhaps the attempt to copy a page from a previous issue of QL World was not the best way to use the program, and certainly the time quoted would, I feel, have given an unfair impression that the program is difficult to use. I have worked with many computer systems, PC compatibles and others, and I have never used, nor seen in use, a desktop publishing program so simple to master as Professional Publisher. *{The sheet Mark sent has not been used as it contains only lines of single characters. SJ}*

Professional Publisher is not, I would readily admit, perfect; I have seen systems, on PC's in particular, that can produce far better results on a laser printer. I must say that the superb quality of output that Professional Publisher can squeeze from humble 9-pin printers I have never seen bettered, and the results on 24-pin printers can be excellent too. Where I feel that the program scores really well, however, is in the ease with which the results are obtained, and it is here that the QL World articles in particular have given what I feel is a very poor picture of the program. For those who have the program and do not recognise the fonts used in my sample page, these are all fonts of my own design. I have spent a great deal of time designing fonts for the program since I obtained it, and these should soon be available from Digital Precision. I have some graphic design experience, and as well as designing fonts, I hope to be doing some articles and tutorials on how to design page layouts with Professional Publisher.

Certainly, owners of the program who have comments to make on how easy or difficult they find Professional Publisher to use will, I hope, write to both Quanta and QL World to comment on these matters. I can definitely see a place for people who wish to redress the balance unfairly, as I see it, weighted against the program by the QL World articles.

LIGHTNING WITH QRAM (or QPAC2)...
I have yet again seen an example of somebody having trouble with QRAM interacting badly with Digital Precision's Lightning program. This is very odd, as the answer is in fact in the Lightning manual. Always load Lightning first, i.e. BEFORE Qram; end of trouble!

Mark Knight, 304 Portobello Road, Notting Hill, London, W10 5TA

COPYING FULL MS-DOS 5.25" DISK TO 3.5" FROM SUPERBASIC

I am a Spanish user of PC Conqueror which is very good on some jobs, but very slow in all. I use disk drives 3.5" (720K) and 5.25" (360K). Then I have no problems with normal MS-DOS format.

My small SuperBASIC program is good for copying protected 5.25" MS-DOS disk to 3.5". It needs GET and PUT command of Toolkit II. In some floppy interfaces, you can invoke it with TK2_EXT or FLP_EXT command. In my configuration, FLP2_is a 5.25" drive and FLP1_ is a 3.5" drive.

```
10  PRINT "Place original disk in flp2_ and destination in flp1_"
20  PRINT "press a key to continue"
30  PAUSE
40  saltos
100 DEFine PROCedure saltos
120 OPEN #3, "flp2_*D2d"
125 OPEN #4, "flp1_*D2d"
130 AT 3,8: PRINT "Copying Track "
```

```
140 FOR ps=0 TO 40-1
150 FOR cr=0 TO 2-1
160 FOR sc=1 TO 9
170 GET#3 \sc+cr*256+ps*65536,s$
180 AT 3,23: PRINT ps;" Side ";cr;" Sector ";sc; " ";
190 PUT #4 \sc+cr*256+ps*65536,s$
200 END FOR sc
210 END FOR cr
220 END FOR ps
230 CLOSE #4
240 CLOSE #3
250 END DEFine saltos
```

Please, I wish to receive letters from any Spanish QL user.

Salvador Merino, Ctra Cadiz, Ceramicas Mary, 29640 Torreblanca del Sol, Fuengirola (Malaga), Spain.

SANDY KEYBOARD

Some time ago, I bought a second hand add-on keyboard for my QL. I hope the following will identify the board to others. It was sold as a "Sandy". It connects to the QL via a 20-wire ribbon cable and a small pcb which slots directly into the QL's sockets; "SPEM" is stamped on the connector pcb; the keys are soldered directly into the main pcb on which is marked "SMD TAST."; there are two ICs HEF4066BPB HSS83401W on the main pcb (one for upper case, one for lower case?); the keyboard was originally sold by Strong Computers in Camarthen.

My QL is an early (1984) D09 series machine which was originally an "AH" version QDOS. I replaced these with the "JS" ROMs from a spare D16 machine and they work fine. I also have a Trumpcard fitted. This means that the ALT + ENTER command line recall works on power-up.

The keyboard appears to work OK with the AH ROM but if I use the JS ROM I suffer two problems. The first appears to be keybounce. For example, the "7" key bounces on both the horizontal row and the numeric keypad. The number "9" and "0" keys on the horizontal row do not bounce, but if I use the shift to get "(" and ")", I get four or five of each. However, I am not convinced that it really is keybounce because if the "9" and "0" keys are bouncing, why do they only bounce when the shift is used, and is it coincidence that both "7" keys bounce? I suspect that there is more to it than this. Has anyone else had this problem, and what is the solution - polling rate of the keyboard? The second problem is that although pressing ALT and <some alphabetic key> produces the <alphabetic key> correctly, the command line editor doesn't work. Any ideas anyone?

Mr J. M. Spencer BSc MBCS
32 Grays Road, Grangefield, Stockton-on-Tees, Cleveland, TS18 4LX
Tel: (0642) 677174

MODIFICATIONS TO LIBRARY HOURS

As I am now attending college on two nights of the week besides daily doses of same, I would like to modify the suggested hours printed in the Septembers issue of Quanta.

Mondays and Fridays 6pm - 10pm. Tuesday and Thursday 8-30pm to 11-30pm. I still will not be available to take calls on Wednesdays as this is my family night. Other nights remain unaffected.

Will readers kindly note that cheques must be made out to QUANTA and not to me personally. Some have done this. Neither should you send stamps or cash to cover the cost. Only postage should be in stamps to the value of the postage charge and not included in with the cheque. We have no cashing facilities.

All in all I must say that this job has kept me on my toes these days. I will not die of boredom. I get some interesting conversations on some of the calls I get, and I meet some nice people in this way too.

By the way because my name has been mentioned in Quanta, I am not an expert as some people seem to think. Neither am I an official of the club.

Now that I have broken the ice and if Sarah has got over the shock of hearing from me after all this time, I may send one or two items for the magazine(newsletter?).

Tom Mould, 141 Spring Bank, Hull, HU3 1BL.
Tel: (0482) 212184

LIBRARY CORNER

IMPORTANT NEWS
As from November 1st ALL programs available from the Quanta Library will not be subject to the 50p copy charge!!

This change of policy was decided at the committee meeting held at the Portishead workshop; also new charges for disks and microdrives available to members were determined as 50p for 3.5" disks, 25p for 5.25" disks and £2-00 for cartridges. All other aspects for ordering library programs remain unchanged i.e. return postage, proof of membership etc.

QUALITY CONTROLLER
David Johnson has reluctantly had to give up the post of Quality Controller. I have to confess that there was more reluctance on my part to accept Davids resignation than on his side. He has done a grand job under often difficult circumstances and I know that Leighton Davies will join with me to thank David for all the hard work that he has put in during his term of office. Thanks mate!

Rising from the ashes, so to speak, James Methley has agreed to take on the post of Quality Controller. I am sure that members will welcome James to this task. James will also be able to handle 3.5" disks as well as 5.25" disks and will continue to be a sub-librarian for the time being.

LIST OF U.K. SUB LIBRARIANS

Cliff Martin 14 Scotteswood Avenue Chatham Kent ME4 6HB Tel: 0634 406578 6pm-10pm Mon-Fri (3.5" disks)	Roy Brereton 94 Teignmouth Road Clevedon Avon BS21 6DR Tel: 0272 871917 6pm-10pm Mon-Fri (Both Formats)	Tom E. Mould 141 Spring Bank Hull Humberside Tel: 0482 212184 6pm-10pm not Wed (Both Formats)
James Methley 4 Parkside Lea Preston PR2 1YS Tel: 0772 736713 Sat/Sun anytime (Both Formats)	Stephen Hewitt Portsdown Vicarage Portsdown Hill Rd Portsmouth PO6 1BE Tel: 0705 375360 6pm-10pm Mon-Fri (CARTRIDGES ONLY)	Norman Dunbar 21 Ferguson Court Bucksburn Aberdeen AB2 9AG Tel: 0224 714840 6pm-10pm Mon-Fri (Both Formats)

Note: Both Formats = D/S 80 trk 3.5" & 5.25" disks.

LIST OF OVERSEAS SUB-LIBRARIANS

L.H.Davies Glanmor, Brynna Rd Pencoed, Bridgend Mid-Glam. CF35 6PD Tel: 0656 860398 (All Formats)	Wolfgang Lenerz 16 Rue Liancourt 75014 Paris France Tel: TBA (T.B.A.)	V.Kuchin PO Box 729 Paramatta NSW 2124 Australia Tel: N/A (3.5"disks)
Johan Boman Lilla Cedargatan 5 S-421 74 Via Frolunda Sweden Tel: TBA. (3.5" disks)	Eros Forenzi Via Valeriana 44 23010 Berbenno (Sondrio) Italy Tel: 0342 492323 (3.5" disks)	Werner Donne Torenstraat 14/7 B-3500. Hasselt Belgium Tel: 11272359 (3.5" disks)
Paul Holmgren 5231 Wilton Wood Court Indianapolis Indiana 46254 U.S.A. Tel: 317 291 6002 (Most QL Formats)	Kees van der Wal Kwekerijstraat22 2613 Ve Delfi The Netherlands Tel: 31 015 140367 (3.5: disks)	Tom Erlandsen Dt.Kirchgasse 14 CH-3280 Murten Switzerland Tel: 037 715580 (Both Formats)

Note: Leighton Davies is the Overseas Sub-Librarian and will only be available to copy for those overseas members who do not have a national sub-librarian.

NEW PROGRAMS

The following programs should be available from sub-librarians by November 1st.

Qpage	Prt_fonts_3
Netman	Specials_2
Forth2	Languages_1
Sector Editors	Util_gen_3
Mand2	Mandel_1
VT52_bas	Comms_Xfer_1
Prolog (Revision)	LAnguages_1
Computer Library	Misc_Demo_2
Spring_clean (Revision)	Util_Gen_2
Quanta Index	Specials_3
Archive Management	Psion_2
Ptools	Util_Tkmc_1
Colours	Graphics_1
Movie Demo	Misc_demo_3
Z88 to QL (Revision)	Comms_Xfer_1
STD Codes (Revision)	Psion_3
Pointer Programs	Specials_4
The Glazier	Util_Gen_3
Extbas (Revision)	Util_Tkmc_1
Heartbeat	Educ_1
Advprint	Prt_fonts_3
Pedigree	Psion_3
Fileexch	Util_gen_3
Logbook	Util_gen_3
Enigma	Util_gen_3
Election	Specials_2
Qlibm (Revision)	Comms_xfer_1
Galton Mailboard	Misc_demo_1
Cyborgwar	Gms_strat_4
Converter_bas	Comms_xfer_1
Aptitude Test	Specials_4
Animals	Educ_1
Berg	Gms_strat_4
Deu	Psion_2
Matchbox	Games_gen_2
Qlcad	Cad_1
Mandelbrot Menu	Mandel_2
Windows	Graphics_2
Shell	Util_gen_3
Trek	Games_gen_2
Sticks	Graphics_2
Tetris	Games_gen_1
Newclick	Util_gen_3
File Rescue	Util_gen_3
Dragon	Misc_demo_1
Bulletin Board	Specials_5
Mandeldemo	Mandel_1

I will be supplying the sub-librarians with a "Revision" disk that will include revisions to existing programs. This will be available to members who wish to update their existing library disks. This disk will also have an 'update'_doc on it to keep members informed about new programs in the library while the existing libguide is being revamped/rewritten. The revision disk will also carry copies of the formally charged programs. These are as follows: Wordlist, Crypter_exe, Spellbound Dictionary, Caser_exe, Diffe_exe, Makexe_exe, Turbocopy_exe, Sendfile and Statprep.

Well, I think that's all for now. See you at the next workshop or hear from you by phone.

Roy Brereton

SMALL ADS

WANTED
A serial to parallel centronics interface for use with the QL. Also wanted a Seiko R.C. 1000 wrist terminal complete with QL software on microdrive or 3.5" disk, RS232 serial cable and two instruction manuals (as reviewed in the July 1987 edition of QL World). Cash waiting.
Paul Moorhead, 22 Lownds Terrace, Wlker, Newcastle Upon Tyne, NE6 4BD
Tel: (091) 276 5616

WANTED
Hi-Soft Devpac.
Burt Newell, 2 Hollings Lane, Hawarden, Deeside, Clwyd, CH5 3JX
Tel: (0244) 532465

FOR SALE
With some sadness I am putting my Thor up for sale, offers from good homes only please!
The equipment comprises: Thor computer 640Kb RAM with twin 3.5in drives plus a pair of external microdrives. Also Microvitec colour monitor and system software which includes the Thor's screen and multi-tasking software, toolkit extensions, ICE, Speedscreen and Xchange. All this for £475. Also an Epson LQ500 24 pin printer 150/50 cps with sheetfeeder for £175. Software for sale is Text87v3, Founted89 and 2488 together for £45 and Lattice C for £40. These integrated together give a first rate word processing and computing system so I am offering the entire assembly, which may be seen working, for £695.
Les Coveney, 144 Portsmouth Road, Cobham, Surrey KT11 1HX.
Tel: (0932) 64915

FOR SALE
JS QL with Microvitec Cub colour monitor, Psion software plus assorted microdrive cartridges. £170.
Brian Plowman, 12 Trafalgar Road, Eaton Ford, St Neots, Cambs, PE19 3NA

FOR SALE
Amstrad DMP 2000 Printer £75. Lockable disk holder(50) with 29 5.25" disks £15. Complete CPM emulator (Success, CPM Emulator on ROM, Supercalc spreedsheet, Utilities, Small C, comprehensive documentation) £50. QL World files (1986-1990): SuperBASIC/Better BASIC £6; DIY Toolkit £6; ROM Bugs + Connections (Colin Opre series) £6.
Alan Wilson, 24 Blnheim Place, Larbert, FK5 4PP
Tel: (0324) 562722

BEREAVEMENT SALE
Hardware:
QL 128K JS £70, QL 128K JS (prints from SER2) £50, QL 512K JM (built-in expansion) £130. Miracle Trumpcard 640K £100, Miracle disk card interface + toolkit £40, 2 Cumana disk interfaces £30 each. Miracle dual 3.5" diskdrive £90. Citizen 120D dot matrix printer £50, Miracle interface for printer £8. Philips mono monitor £35, Sinclair colour monitor £120. Tandata Q-mod, Q-call & Q-connect (maybe faulty ?) £15. 48K Spectrum+ £30. Opus Discovery twin 3.5" diskdrive £70, Tech. Research Beta disk interface (allows the use of QL diskdrives on Spectrum) £10. Alphacom 32 printer + 17 rolls of paper £20. Kempston E printer interface £10, Interface_1 10. 3 Micro Drives £6 each. Spectrum monitor interface £6. Collector's item : ZX80 ! £10 o.n.o.
All with instructions/handbooks.
Software:
On EPROMs : Speedscreen £10, ICE + Choice £10, Super Toolkit £10.
On Cartridges : QWriter £5, QSpell £10, Spellbound £10, Filebound £3, Speedscreen £5, Keydefine £5, Better BASIC £10, Cartridge Doctor £5, Chess £8, QL TurboQuill £7, Tab-Editor £7, Turbo & Turbo Toolkit £40, Files2 £3.
On 3.5" disks : Artice £5, Icicle £5, PC Conqueror + MS-DOS (5 disks + books) £55, Cadpak Graphics £5, Super Media Manager £10, Overdrive £10, Taskmaster £10, Ultraprint £8, Archive Tutor, & Sedit £8, Recover £8, The Editor Special Edition £20.
All with manual / user guide.
IBM Software on 3.5" disks : Virus Killer £5, Diskover £5, Baker's Dozen £2, PC Prompt £2, Magazine Utilities £2, File Utilities £2, Mail List £2, Labels Unlimited £5.
A box full of Spectrum programs mainly tapes, some cartridges - phone for details.
Imre Dominik
Tel: (0484) 537048

FOR SALE
JM QL with 896k TrumpCard, twin 720k 3.5" disk drives housed in KBL 128 box, Lightning, Conqueror, Digital C, Editor, Metacomco Assembler, Psion suite, TK III, Serial 8056 printer, QL books, loads of QL worlds, Quantas and Quanta Library disks. £250
Ian Church, 8 Chesham Place, Kemptown, Brighton, BN2 1FB
Tel: (0273) 680896

SOMETHING FOR THE WHOLE FAMILY

I wrote in the Quanta magazine a couple of times last summer, and rambled on about the various things I do with my QL. The subject that generated by far the most interest was Family Trees and genealogy. Not much was printed in the magazine, but I did get a good deal of mail about it.

Nobody seemed much interested in my use of the QL for managing a cactus collection, so I won't mention that again.

Spurred on by the family tree interest, I set to work on the project I mentioned then which was to create a genealogical program for the QL. Twelve months later I can report that QL_Genealogist (or QLG) is now a reality and available.

Those of you who have used the Archive procedures from QL World or the more recent ones from me will find that QLG will do every thing they do plus a whole lot more and many times faster too.

QLG serves two main purposes. First it enables you to enter a connected set of people who make up a family (or several unconnected sets for that matter). You can then move around the family on the screen or run various reports to your printer.

One of these reports is a real family tree diagram of descendants (something that not many professional genealogical programs can do). If you have only 128k of memory or only microdrives, that's all you can do.

If you have memory expansion and 3.5" disks, read on. For the serious genealogist there is the facility for storing, sorting, searching and indexing your research records. All that groping about in graveyards, poring over parish registers and wrestling your way through St Catherines House can now be recorded in QLG.

Each record can be linked to a person in the family tree as the evidence for him or her appearing there.

QLG in the shape of a 3.5" disk with two executables (full size and 128k version), Kings and Queens demo back to William the Conqueror (30 generations) and 32 page A4 manual is available from the address below for £19.50 including postage. If you would like the cut-down version on microdrive, please send a formatted cartridge.

Chris Boutal, 42 Charwood Rd, Wokingham, Berkshire, RG11 1RY

D I Y TOOLKIT

These popular and useful *QL World* tutorials are available now from *Quanta* members Simon Goodwin, Phil Spink and Richard Alexander, in much-expanded disk form - painstakingly tested on QLs from "AH" to "MG", Thors, emulators and compilers. Volumes include clear user, system and technical notes in *Quill* _DOC format, SuperBASIC and compiled demos, assembler source and object code, testers and more.

This list shows the twelve independent Volumes available; they each cover distinct aspects of QDOS, so you can try them in any order.

[B] BASIC TOOLS Explore interpreter RAM with a SuperBASIC token disassembler, FORGET keywords, POP RETurns & debug structured code with WHY. Exts: *BPOKE BPOKE_W BPOKE_L BPEEK% BPEEK_W% BPEEK_L*
[C] CHANNELS Change the SuperBASIC default channel, or access hidden window settings. Extensions: *CHAN_B% CHAN_W% CHAN_L USE*
[E] ERROR CONTROL Edit or input default strings in limited space, avoid coercion errors, zap all tasks. *PURGE CHECK% CHECKF EDLINE$*
[F] FILE TOOLS *CustomKit* builds toolkits from _CODE & _BIN files; *EPROM Builder* makes ROM images. File header exts: *GetHEAD SetHEAD*
[G] GRAPHICS Fast, precise pixel and vector graphics for MODE 4, MODE 8 and Thor MODE 12, plus decorative demos. *PLOT DRAW PIXEL%*
[H] HEAP & HOROLOGY Four 20mS stopwatches; SHOW_HEAP RAM explorer & info. *LINKUP RESERVE DISCARD T_ON T_OFF T_START T_STOP T_COUNT*
[J] JOBS Multi-tasking the DIY way, for excellent compatability without gobbling RAM. Task Control toolkit plus *TASKFORCE, TASKNAME$* (names task taking input) *PSION_PATCH, TASK_RENAME & ADDNAME files*
[M] MULTIBASIC Compatible multiple SuperBASICs for **any** QDOS/Argos system! The new version 4.0 can swap screens as well as programs & variables. Extensions: *UNLOAD RELOAD RESAVE REMOVE SCR_SAVE*
[N] NETWORKING 3 improved NETPALs issue commands remotely to QL, Minerva or Thor (needs 2+ networked computers with FSERVE). MEM is a new QDOS device that shares memory between tasks or computers.
[P] PIPES & PARAMETERS Machine code powers from BASIC extensions, plus SEARCH_PROG & CAT columnar directory demos. *PARTYPE PARSEPA PARHASH PARNAME$ UNSET QLINK QCOUNT% QSPACE% QSIZE%*
[Q] QUEUES & QDOS QUEUE% types into programs, QLIST scans keyboard queues & CHLIST names all open channels. *CHBASE SYSBASE QUEUE%*
[R] REPLACE exchange variable, array and device names, or look up details; case converters: *LOWER$ UPPER$ NEWCHAN% LOOKUP% REPLACE*

Prices: Initial order processing charge of 4 Pounds, then 3 pounds for each Volume, e.g. 1 volume #7, 2 for #10, 4 for #16, 8 for #28 and so on. All prices include Branded disks (state 3.5"/5.25") but microdrive users must send us one blank formatted cartridge for each volume ordered. We regret that we can no longer buy cartridges at an economic price. Kindly make payment to DIY TOOLKIT in British Pounds, Sterling Postal orders, Drafts, Eurocheques, or UK cheques. **PLEASE make it very clear which Volumes you want, e.g. [B], [J] etc.**

C.G.H. SERVICES
Cwm Gwen Hall, Pencader, Dyfed, Cymru, SA39 9HA
Telephone: Pencader (0559) - 384574

STAR PRINTER OWNERS!

If you own a 9-pin Star printer such as the LC-10 or the older NL-10, congratulations! You have probably the most full-featured printer on the market. If not then at current prices you will never have a better opportunity to buy.

Having read the manual you will know that along with all those wonderful facilities is an enormous printer buffer which with the appropriate DIP switch settings will allow you 76 of your own letter shapes in the RAM buffer. These NLQ founts, stored as binary bytes, are in an unusually large design matrix of 23x18 dots. Not content with the in-built founts we have designed a series of new ones with the aid of our graphic designer. These have been perfected over the years and have been in general use by professionals (doctors, accountants etc.,) as well as in business correspondence. Of the many comments excited by CVs produced with our founts - remember, this is on a 9-pin printer, not laser or 24-pin - all have been favourable. Some tinged with envy and many enquiring just how it was done?

Now you too can enjoy the advantages of well balanced, fully proportional founts achingly produced over hundreds of hours and have printer output that will amaze your friends and colleagues. Once you have set the DIP switches as per the manual, a simple COPY "" TO SER1 command will make all further output in the new style. This is no plug-in cartridge that will cost you up to £50 nor does it require any other program to generate the new lettering in some arthritic fashion - it's already all there in the printer. Therefore, all standard facilities such as underlining or emphasizing or even using double height/ double width is all instantly available. Just like with the resident founts. Not only are our LC-10 founts fully proportional but there are also italic variants for many of them and to aid in justification each fount is also available in standard 10 cpi form. As the NL-10 has a larger buffer but no proportional ability each fount consists of 96 characters.

The cost? On some machines (the BBC) we have seen such founts offered for £25 each! Unbelievably, each of our founts will cost you only £2.50 or less when bought in our FONTpacks. So hurry, order now to get the most out of your printer (it also makes a wonderful gift).....

ACTUAL 9-PIN STAR PRINTER OUTPUT (10 CPI):

This is News fount
This is Fine fount
This is Bamboo fount
This is Outline fount
This is Cursive fount

in italics
in italics
in italics
in italics

FOUNTS:	STANDARD(PROP):	ITALIC(PROP):	10CPI	ITALIC(10CPI)
NEWS	0	1	2	3
FINE	4	5	6	7
BAMBOO	8	9	10	11
OUTLINE	12	13	14	15
CURSIVE	-	-	16	-

PROPORTIONAL IS NOT AVAILABLE ON THE NL-10; ALL SUCH FOUNTS WILL BE 10CPI.
PLEASE QUOTE THESE FOUNT NUMBERS WHEN ORDERING ON THE FORM.

Ordering information:

PLEASE ADD £2.50 FOR P&P (£5 FOR OVERSEAS). FOUNTS AVAILABLE ON 3.5 OR 5.25 INCH DISCS (PLEASE SPECIFY). MICRODRIVE ORDERS ONLY PROCESSED CURRENTLY IF SUPPLIED BY YOU. LC-10 FOUNTS ARE PROPORTIONAL OR 10CPI, 75 LETTERS; NL-10 ARE 10CPI ONLY, 96 LETTERS (SPECIFY WHICH). IF YOUR 9-PIN PRINTER SUPPORTS USER SPECIFIED NLQ FOUNTS (>=75) THEN SEND DETAILS OF THE APPROPRIATE SECTION OF THE MANUAL AND WE WILL TRY TO CONVERT OUR FOUNTS FOR YOU. WE ARE CONSTANTLY EXPANDING OUR RANGE WITH IMMINENT RELEASE OF STYLES SUCH AS COSMOS, COMPACT AND SCRIPT - BUT ONLY WHEN WE ARE ARTISTICALLY SATISFIED WITH THE BALANCE OF EACH LETTER. AS THIS IS A PRINTER RELATED PRODUCT IT IS COMPATIBLE WITH ALL QL HARDWARE ARRANGEMENTS AS LONG AS THE NORMAL ROUTE OF ADDRESSING YOUR PRINTER IS MAINTAINED. PAYMENT IS BY (EUROICHEQUE/CASH OR POSTAL ORDER (IN STERLING) TO AMINASOFT, 59 MAIN ST, NEILSTON, GLASGOW, UK (ENSURE ALL CHARGES ARE PAID AT YOUR END). PLEASE ALLOW 28 DAYS FOR DELIVERY.

PLEASE SUPPLY ME WITH: FOUNTS: £2.50 EACH

3.5 INCH DISC _____ NUMBERS _____

5.25 INCH DISC _____ _____

MDV (YOURS) _____ _____

NL-10/LC-10/OTHER (DELETE) _____

MY NAME & ADDRESS IS:

FOUNTPACKS

A:	ALL (PROPORTIONAL)	£20
B:	ALL (10 CPI)	£20
C:	STANDARD (PROPORTIONAL)	£10
D:	STANDARD (10 CPI)	£10
E:	ITALIC (PROPORTIONAL)	£10
F:	ITALIC (10 CPI)	£10
G:	ALL (NL-10)	£20

TOTAL COST:
(ADD P&P) _____

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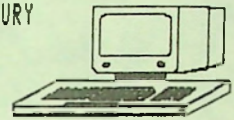

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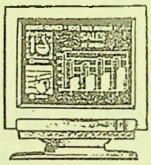

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