QUANTA

VOLUME 7 ISSUE 5   JUNE 1990

CONTENTS

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 (05888) 463	General Secretary	Philip Borman 62 Prospect Avenue RUSHDEN, Northants NN10 9DH Tel (0933) 418277
Membership Secretary	David Johnson The Corner House Loxley WARWICK CV35 9JT Tel (0789) 842543	Treasurer	Michael Jackson 21 Grove Cresent Addlington, CHORLEY Tel
Newsletter Editor	Sarah Johnson The Corner House Loxley, WARWICK CV35 9JT Tel (0789) 842543	Software Librarian	Leighton Davies Glanmore, Brynna Rd Pencoed, BRIDGEND CF35 6PD Tel (0656) 868398
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, David Johnson, The Corner House, Loxley, Warwick. Tel (0789) 842543

The opinions expressed in the newsletter are those of the contributors, and are not necessarily those of the Editor or Committee Members.

SUBGROUPS

Title	Location	Date	Contact
Essex	Rayne Village Hall Gore Road Rayne Nr. Braintree	2nd Sunday Every Month 2.30 onwards	John Mason 'Karama', London Rd Billericay, Essex Tel (0277) 651593 or Dave Walker Tel (0707) 52791
Solent	Delta Leasing Ltd. Garfield Road Bishops Waltham	1st Saturday Every Month 1500 to 1900	Graham Evans (042) 121 3350 or Eric London (0329) 663501
Sweden	Physics Dept Chalmers University of Technology Goteborg	2nd Saturday Every Month 1100 to 1400	Johan Boman Toftaasgatan 73 S-421 47 Vastra Frolunda, Sweden
Mid Anglia	Robinson Hall Lolworth Cambridge	7.30 to 11.30 Every 2nd Monday 1.30 to 6.00 Every 4th Sunday	Peter Rowell 347 St Neots Rd Hardwick. Cambs Tel (0954) 210692
Leicester	Ancient Order of Forresters 35 St Nicholas Place Leicester LE1 4LD	8.15 every 2nd Tuesday of each month (ex July)	Peter Ash 53 Woodland Road Leicester LE5 3PG Tel (0533) 766857
Birmingham	Holloway Pub Holloway Head Just off inner Ring Road. Central Birmingham	7.30 every 1st & 3rd Monday	Mike Bedford White 16 Westfield Road Acocks Green Birmingham B27 7TL Tel (021) 708 2560
Mid Cheshire	The Merlin Pub Middlewitch Road Crewe	Every Monday 7.00	Alex Robertson 12 Bude Close Crewe, Cheshire Tel (0270) 500565
Merseyside	3 Barnard Road Birkenhead	Alternate Mondays	Don James 3 Barnard Road Oxton Berkenhead Tel (051) 652 7366
Northampton	Kingsthorpe Community Centre	2 to 5pm every 2nd Saturday	Terry Harman 304 Obelisk Rise Northampton Tel (0604) 842875

East Anglia	Guildhall Thetford	2nd Saturday Every Month 6.30 to 11.30	George Katsoulis 167 St Johns Way Thetford, Norfolk. Tel (0842) 753843 Geraint Jones Tel (0842) 762486
South-West	Middlemoor Exeter	Next meeting Sunday 6th May 2.30 to 7.00	Roy R.Johnson Flat 2 66 Victoria Road Exmouth, EX8 1DV Tel (0395) 275298
Bristol	Portcullis Fishponds	Sundays every 4th week	Chris Gregory 7 Argyll Street Eastville Bristol Tel (0272) 513653
Newcastle -on-Tyne		1st Sunday each month	Denis Crowe 15 Midhurst Road Newcastle-on-Tyne NE12 9NU Tel (091) 2665175
Lancashire	Lisieux Hall Social Club Dawson Lane Whittle le Woods Chorley	1st Monday each month	Steve Hutton 44 St.Mary's Road Bamber Bridge Preston, PR5 6TE

If your sub-group is not mentioned here, write to the editor with full details for inclusion in future issues.

CALENDAR

June 9th – 10th	Horticultural Hall, London	All Formats Show
June 22nd-24th	Thetford	Quanta Workshop
September 1st – 2nd	Essex	Quanta Workshop
September 30th	Portishead	Quanta Workshop
October 20th-21st	Worthing	Quanta Workshop

EDITORIAL

Many members wonder what programs I use for printing the newsletter. Well, ALL of the newsletters I have edited have been produced using Version 2 of Text87. This month I start with Version 3, plus the continued use of a small SuperBasic program written by Phil Borman. Phil's program enables me to put the lines in between the articles and to put the headings into bold, by making use of the type options within Text87, using altkeys. The magazine is printed on a Panasonic KX-P1124 24pin printer, using the printer driver supplied by Fred Tousi for the Panasonic. I would like to thank Fred for a very good program.

A member sent in an article to me about DP CAD. Would the writer kindly get in touch with me please.

Another member gave David a program called Heartbeat for the library, at the last Portishead workshop. Will this member contact David please.

We have had many members ask "What was the answer to that question in such and such newsletter". We would appreciate it if the writer or the reciever of the answer to these questions would drop us a line and inform us of the outcome. Others tend to have the same problems sooner or later. So that we may all then benefit from the answers let us have a copy please.

Apologies to all those members who find this issue full of hardware articles. I did warn you that if you did not send in some new articles, then this sort of thing would happen. If you wish to continue to have me produce a 48 page magazine then I do require a good mix of articles with headings, as trying to think up new ones is wearing down the 'grey matter'. Some of the topics which we have been asked for are:-
Abacus, How I started in computing, What do I use it for, Tips for the beginner.

There has to be a wealth of information in most members heads, which they could pass on to other members. After all what is a group like ours for, if not to pass on, and help others with the information that we have learned and/or aquired. Don't worry to much about your lack of writing ability, you are not writing for a major monthly magazine, and you don't have to be word perfect. We can help in this aspect. Just get it down in something like a readable form, on cartridge or disk plus a hard copy. We will do the rest.

Look through your older issues and you will see the same names over and over again. This seems to imply that out of our large membership we only have a few members who can write articles. I don't believe this, there has to be more able writers within our group. So don't leave it to someone else to write YOUR magazine. Think of something, maybe on any of the aforementioned topics, respond to articles, we would rather have too many to publish than none at all. Besides our postman will no longer be able to justify the use of the van he has, if the mail coming through our letterbox decreases. The poor man has got out of the habit of cycling up and down our local hills.

Richard Alexander of CGH Services, has been kind enough to send us issue 3 of his QL Technical Review magazine. This magazine has lots of informative articles, on such diverse items as comms, adjusting TV's, a machine code tutorial and many more. Well worth the £1.58 it costs.

What caught our eye was the letter written by Stuart McKnight in response to an article about Minerva, not so much the content, but the quality of the print in comparison to the rest of the magazine. It shows what can be produced IF you have the right equipment. We will just have to dream a bit longer.

It has come to our attention that some QL groups in Europe would like to start a Public Domain Software Library. They are also stating that QUANTA has dragged it's heals over assisting in the formation of this library. To put the record straight. Phil Borman, Alex Tegg, and David Johnson went to a Microfair in Belgium last year. At this meeting it was arranged that all the attending QL groups in Europe would send to QUANTA their library programs, plus a small fee to cover costs relating to postage and the disk purchase. QUANTA would then distribute the programs to each of the groups in Europe. So that all the groups would benefit from the exchange of programs.

David also arranged with these same groups, that we be allow to place their programs in our own library. Since that time, Leighton on behalf of the Committee has written TWICE to all of these groups. Two have been kind enough to respond, QLCF of France and QUASAR of Germany. Both these groups have sent programs to be included in our library. The rest of the groups have continued to ignore the letters we have sent.

The French and German programs that we have obtained on behalf of our members, are currently being translated into English. In the near future we hope to start adding these to the largest QL library in Europe, ours.

David and Sarah Johnson. (This time)

QUANTA MID ANGLIA SUBGROUP

Our first Sunday meeting was held on 22 April at Lolworth, with nine members in attendance. A talk on Taskmaster with Flashback, Qpac2 with Flashback SE, embedding printer control codes into Quill, and making printer control _dat files for attaching to AltKeys was given by myself. This was of great help to our less experienced members and showed how a system could be tailored to their own use by writing a boot file to configure a system as required. As with all talks, there are things which you may not understand fully and a phoned query can soon clear the problem. Our Sunday meetings start at 2.00pm and finish at 6.00pm, we hope to include talks on various programs during the year.

Peter Rowell, Organiser, Qmas.
Tel: (0954) 210692
29.4.98

SOUTH WEST SUB GROUP

The next meeting will be on July 1st or July 8th, probably in Cornwall. Please contact:
Roy Johnson, Tel: (0395) 275290

CORRECTION TO WIRING MATRIX FOR OPD/TONTO KEYBOARD

J12, Line 8 to 38 - 37 - 57 - 48 - 34 - 21 - 23 - 7.
     Line 9 to 13 - 59 - 65 - 39 - 36 - 9 - 8.
Peter Rowell, Qmas.

QUANTA / QMAS / FENTIGER BB ANSWERING SERVICE.

From 13th May 1990 the above service will be available on 0954 218692. The Fentiger Bulletin Board (RINGBACK) will be online from 9pm to 7am on weekdays only, at all other times it will be on manual or machine answering. The machine answering will contain a recorded announcement of the next QMAS meeting and the next QUANTA Workshop. It may also contain notice of QUANTA trips to Continental Workshops and Shows. Messages can be left on the tape for QUANTA or QMAS. Please begin your message, "Message for (Quanta or Qmas)" and end it with your name and phone number, as it is also used for business purposes as well.

Peter Rowell, QMAS.

STAND UP AND BE COUNTED

Tommy Thompson's cry from the heart in the March QUANTA titled 'Realisation' provoked me into standing up and being counted as perhaps he anticipated. Like him I am also a computer illiterate and likely to stay that way unless I can find a relatively painless method of improving my own computer competance. In many years working in industrial training, from which I am now retired, I can't remember a learning situation which was so bedevilled with technical jargon. The QL Manual and related literature goes some way to help disspell the gloom and educate the beginner but always assumes a level of computer literacy which the reader often does not possess. It seems to me that writers of computer literature and those who prepare the advertising material for computer software, all apply the well known principle of 'the mystification of the ignorant by the indolent'. However, if the majority of computer users are all highly competant then why should they take the trouble to write understandable english for the benefit of the few. It may well be that the problem lies in our lack of programming skills. I would agree with Tommy Thompson that a beginners group is a none starter but what could be helpful would be an article or so from the knowledgeable members of Quanta, spelling out the road they trod in achieving the high level of computer expertise which they now enjoy. I suspect that their happy position was only reached after many hours spent in the writing of computer programs. If that is the hard fact of life then I am destined to remain a 'looker on'. In the meantime I will continue my quest for a suitable cheese for my mouse.

Raymond L Fowles, 6 Exford Road, West Derby, Liverpool, L12 4YD.
16.4.90
{I cheated, with the help of courses at college. David started with a book called 'Choosing and Using Your Home Computer' edited by Jonathan Hilton. This is a very good book, with lots of colour pictures, diagrams and easy to understand text. SJ}

PORTISHEAD WORKSHOP

I am a newcomer to Quanta and attended my first workshop at Portishead thanks to my son Ron, who did the driving. He was very impressed with the sign-posting and car parking arrangements.

Now for my impressions of the meeting. Super!! A most friendly welcome was given by everybody we approached. Names we had only read about, Tony Tebby, Stuart McKnight become real live characters to talk to as well as people from the business world, Miracle, Digital Precision, EEC Ltd. The organisation was superb, refreshments readily available and one was able to leave one's belongings in an odd corner and find them still there later on.

What of the seminars? Fascinating, time consuming and very persuasive. DP sold me Lightning Sp. Ed. I already had Conqueror, and Qview convinced me that I needed Minerva. Both ROMs have been installed and are working satisfactorily. I have already booked my driver for Worthing in October!
(I hope this encourages some of you with any doubts about workshops, to come along and have a look. SJ)

I am 75 years old and have quite a story to tell about my progression from 'Doing it Digitally', half and full adders etc. and my first computer which I built around the GI CP1600 with a massive 256 bytes of memory!! Would your readers be interested in still more 'tinkering'?
(For one, I would be happy to read your letter. SJ.)

Many thanks for such an enjoyable workshop, perhaps I may see you at the next.

Richard T Hawkes, 11 Crosswell Close, Sholing, Southampton, SO2 8HE.
9.4.98

TASKMASTER FIX

Resulting from the publication in the February 1998 issue of QUANTA of my request for help with the running of Taskmaster within the Atari/QL emulation, I was delighted to receive a solution via airmail from Arvid Borretzen of Litlabo in Norway who generously forwarded two 3.5" floppies to me. These contained files which included the Atari_bin and Atari_English files of the emulator software supplied by Jochen Merz together with the Hotkey commands but not the Pointer Environment files which are intended to permit use of the Atari mouse within the emulation. Aside from that potential drawback, I now have Taskmaster working fine within the emulation - many thanks Arvid.

I have the impression that many people are turning to the Atari emulation to overcome limitations of the QL whilst preserving the advantages of QDOS and I express the hope that the software houses involved will extend their activities so that their products will be compaticle with the emulator.

BOOKS ON ARCHIVE

In response to David McCullogh's comment on publications dealing with Psion's Archive Database, (QUANTA February 1990) I found that Malcolm Davison's "Advanced Archive..." published by the Sigma Press and distributed both here and in the UK by John Wiley & Sons, was very helpful and quite comprehensive and good value at around 8 pounds. I recommend that he has a look at it in addition to those he mentioned in his item.

DIY HARD DISK INTERFACE

I am prompted to ask whatever became of the QUANTA members' efforts to design a hard disk interface for the QL? The project was being co-ordinated by Terry Harman (QUANTA March 1989 issue) and looked full of promise. Being personally very interested in the SCSI interface by John Alexander, I wrote to Terry to express my interest, and help encourage those involved but nary a word did I ever see thereafter!

I do feel that, even if and when a project lapses for whatever reason, it is appropriate and proper to publish a follow-up so that members are appraised of the situation rather than just letting the matter sink into oblivion.
(That is only possible if I am fed with the information. It is impossible to follow each individual project. SJ)

NEWSLETTER EDITORS

I want to express my thanks to Roy Barber for his work in editing QUANTA's excellent Newsletter which I have looked forward to receiving and enjoyed reading now for a number of years. I've edited an industry-association newsletter myself in years gone by and I know how frustrating a job it can be, especially in the absence of members' contributions. I believe he should feel proud of his work. Personally, I liked the double-column layout but am of the opinion it does not need the centre ruling to separate the columns.

QL AUSTRALIA

Here in Sydney (population about 3.25M) we hold monthly meetings of QL Australia in a licensed club in a suburb which is geographically accessible to metropolitan members. A monthly newsletter is mailed to all current members who number around 55 across this huge land. (There would, I am certain, have been many more QL owners had Sinclair better chosen his distributors here initially, there is none now.

The 'formal' segment of our meetings is dealt with quite quickly and is preceded and followed by informal discussions amongst those present, usually about 15 persons. But at most of the meetings a member gives a talk/demonstration on some topic of interest to the others in addition to the informalities and these are well received. Many regular attendees seem to work in one or other of the segments of computerisation and some are extremely knowledgeable about QL technicalities or programming in SuperBasic or 'C'. The association has offered cash prizes for the best newsletter articles in 2 classes, namely Applications and Software, thus encouraging members to spread their expertise to others via print, something which otherwise might not have happened. Incidentally, their newsletter is forwarded to QUANTA each month.

A group purchasing scheme has been introduced to enable members to purchase their wants from UK suppliers at beneficial rates and to minimise hassles with international payments, freighting and customs clearance and charges and this is a very valuable and attractive service to our members.

Our chairman/secretary is Vadim Kuchin who founded the original QL users group out here and has worked hard and with great good humour to advance the association, liasing with QL users interstate and overseas. He has been ably supported by Ron Potter as newsletter editor, Bob Cochrane as treasurer and by librarians Fred Hartman and Telford Tendys whilst David Burns headed the Communications special interest group. Several of our members are individually members of QUANTA. We look forward to continuing successful operation of QL Australia and we are currently considering ways of locating QL users here so as to increase our membership.

Don Atkins, P.O.Box 23, Waterloo, 2017, Australia.
5.4.90

WANDERER ON DISK DRIVE - SOFTWARE WORKAROUND

When running the game Wanderer from disk drive using the QL Trump Card interface, the disk drive stays on after the game is loaded. While this does no harm, it is annoying.

The problem seems to be related to an access to part of the QL operating system by the Wanderer program before the disk drive is turned off. For some reason, it prevents the drive from turning off.

The fix is very easy. By adding the following line to the boot up file, Wanderer is not started until after the drive is halted. This results in correct operation.

    83 PAUSE 200

(Note that the boot file must have the 'mdv' references changed to 'flp' and the original microdrive program must still be in the machine for the program to run...)

James D. Hunkins, 3375 Homestead Road #15, Santa Clara, CA 95051, U.S.A.
27.4.90

PRAISE INDEED

Having been a Quanta member since the December 1989 show at Leyland I feel I must give praise to the following people for help with products and problems:

David Johnson, Librarian, for help and advice over the phone and an instant return on library programs.

Dilwyn Jones, I have many programs written by Dilwyn and on the odd occasion I have had a problem a phone call to Wales has always been answered with swift results. Dilwyns latest offering "VISION MIXER" is absolutely superb. If anyone wants a visual display for shop, showroom or office I doubt if this package could be beaten. I use it in a small autoelectrical showroom, it runs all day and the program can be altered or edited in minutes to suite the current situation, at the price it is a must for any business, so get on the phone to Wales now.

T. K. Computerware, in order to 'personalise' (I hate that word) "VISION MIXER" I used the "Scanner" from T.K. Computerware. I copy logo's and pictures to make up the screens, finish them of with either PD2, EYE–Q or Image Processor and then I have a moving advertising machine tailored exactly to my business. Although I had a few problems obtaining the Scanner, from the gentleman at T.K. They, having received phone calls from me almost every day for over a month. It is an excellent product and despite its relatively high price I find it is the answer to my problem of putting the picture I want on the screen.

Miracle Systems, after nearly tearing my hair out trying to make one of my printers work correctly out of ser2 I found by accident that the interface from Miracle Systems works automatically from either outlet, it would appear many others don't, well done Miracle Systems, I wish I had known earlier, I wasted half a day messing about, I even at one point rewired a serial plug, all to no avail.

Digital Precision, I find their products of high quality but difficult to use. They always assume the user has some technical and programming knowledge. However, written enquiries are always answered quickly and fully. D.P. kindly keep us informed of shows and events and I am always amused by the way they send cards marked 'URGENT' and 'PRIORITY' with 2nd class postage affixed.

Before I finish, a request, would any Q.L. owners in this area please get in touch on (8423) 582239 for a chat and exchange of ideas, I feel I must be the only Q.L. user in North Yorkshire.

Martin Hopkinson, 28 Knox Avenue, Harrogate, North Yorkshire, HG1 3JB.
9.4.98.

SCHON PC KEYBOARD MOD

For several years I have been a satisfied user of the Schon PC style keyboard. Despite what many QL luddites maintain, I do find the keyboard on my No.2 QL a PAIN to use. I feel that "aquiring a taste" for the feel is a cop-out as it resembles no other feel on earth other than the Spectrum Plus.

However there is one frustration with the Schon PC keyboard (remedied in their PS/2 style one) that should have been addressed in the original design. That is the lack of a single key "underscore", which would make manual file handling a lot easier considering the extensive QDOS use of this character. Indeed there is even a conveniently placed spare key which would be ideal for this purpose; the double-size "zero" key which is only otherwise used when the numerical lock is on.

Delving into the interface I discovered several interesting aspects to the design:

1- The gigantic coiled "hose" has in fact only 6 wires, and can be replaced with a length of svelte flat 6 core telephone cord.

2- The 48 pin chip is not a PIA or UART, but a 8849 generic microprocessor. This means your QL will have THREE (!!!) microprocessors on board , FOUR if you have the Miracle MIDI interface (!!!!).

3- The 8K ROM is not simply a transcoding ROM (input = keyboard matrix, output = ASCII byte), but contains code to drive the additional micro, and NO tables that are adaptable. In fact to get auto-shifted keys (such as underscore) the already implemented SYS REQ (CTRL-C), BREAK (CTRL-sp), PAUSE (CTRL-F5) and (SHIFT-F6 thru F18), cause two sequential bytes to be outputed (output?), which requires additional soft and circuit trickery.

At this stage I threw up my hands in horror and gave up. Somewhere out there remains the person who designed this interface. Surely it would be worth their while doing one hours additional coding to produce a new ROM that has this extremely useful function. I, and I'm sure all other Schon users, would gladly pay £18 for a upgrade. As the PS/2 style keyboard has this function presumably the work is already done ! How about it Schon, or whoever designed the keyboard.

Geoff Wood, New Zealand Embassy Iraq, New Zealand High Commission, Haymarket, London SW1Y 4TQ.
26.3.98
(Keyboard Products Ltd., the manufacturers of the keyboard, maybe able to help. We found them very helpful in sorting out some problems with our interface. Their address is: Unit E2, Welland Industrial Estate, Valley Way, Market Harborough, Leicestershire, LE16 7PS. Tel: (8858) 66934. SJ)

NOT FOR THE FAINT HEARTED.

This is being written using Quill on my newly modified QL. In one end is a half height, (I wish I had used a third height) Matmos supplied 3.5in 728k disk drive and in the other is a Miracle Expanderam board with a Micro Peripherals drive controller plugged in on top so that it re-enters the box. The small stick out is covered by a black plastic box made from my original Qmon pack.

This conversion involved removing the microdrives, 5 volt regulator, heatsink, video modulator, speaker(?), reset button and replacement of some capacitors, together with sundry mods to the add-on boards. Uncle Clive's black box has had some holes cut into it and redundant plastic removed. An ex Spectrum microdrive is plugged into the expansion slot on the right hand end when cartridge software needs to be loaded and a RAM disk used for disk to disk transfers.

The power supply is a 38 watt Astec unit which I collected from Multi Sources, Tel 8988 666842 for £6.58. It is installed inside my Phillips mono monitor together with a small transformer to supply 12v a.c.

So far it has not crashed for hardware reasons but my inexperienced use of incompatible software and RESPR has caused me some anxious moments.

With a spare QL, an extra case and a faulty MicroP board to practice on, no major problem arose. If you want to have a try, send me a S.A.E for a layout sketch and technical details.

My thanks to Terry Harman, Kieth Mitchell and Dennis Briggs for encouragement, advice and supplies.
Ian Ralston, 7 Sillswood, Olney, BUCKS. MK46 5PL.
15.4.98

DEDICATED FUNCTION KEYS FOR HARD-WIRED KEYBOARDS

To add to Peter Rowell's article on hard-wiring the OPD/TONTO keyboard (February Quanta) this is a way of combining a hard-wired keyboard - or even the original keyboard - with a simple system for providing dedicated keys without the need for ROMS. It's hardly a 'high tech' solution, but it's cheap and it works well.

The original idea was to fit a small add-on keypad to the QL which would provide single-stroke keying for the F6-F10 function keys and for BREAK, CTRL/C, CTRL/F5, and so on. This still hasn't been done, because I acquired a suitable keyboard and decided to hard-wire it and incorporate the dedicated keys. These include extra keys on the number pad for the plus sign, hash etc, together with single key delete and underscore. The control of scrolling is no longer a hit or miss affair when it can be halted with one keystroke, and this alone made the project worthwhile. As everyone has their own ideas on the ideal keyboard, I'll stick to describing the basic system, with a few extra comments on the full keyboard.

The circuit is built around the CMOS 4066 chip, which contains four solid-state switches. 4066's are cheap and easily available (I paid 15 pence each). These switches are connected in parallel with the existing keyboard wiring so that two individual switches are operated by a single keypress from the add-on keyboard/keypad. The line to 'CTRL' is operated directly, but a slight delay is introduced on the lines to 'C', 'F5', and 'SPACE'. This makes sure that if 'BREAK' is pressed then 'SPACE' operates before 'CTRL'; exactly as it does when bashing away on the standard keyboard. The 2.2uF capacitor and the 10k resistor on each of the appropriate CMOS inputs takes care of this.

The circuit diagram shows the basic idea. Each of the dedicated keys has one contact connected to 5 volts. The other contact has two connections. One through a diode to the common line which operates 'CTRL'; and one through the resistor/capacitor delay to the other switch input. To keep things simple I've only shown keys which work in conjunction with 'CTRL'. Keying of F6-F10 is carried out by connecting these keys in the same way to another common line controlling 'SHIFT'. All the outputs from the CMOS switches are wired across the correct outputs to the J11/J12 connectors, in parallel with the normal output from the keyboard.

The components are not critical. The diodes can be any small signal type, and cheap ceramic disk capacitors work fine. The circuit can be built on Veroboard and tucked away under the keypad. On my full keyboard, the hard-wiring for the normal keys was brought out to a strip of Veroboard in the same order as the original membrane connections. This bus-board arrangement makes it easier to see where the connections for the CMOS switch outputs have to go, and also simplifies wiring to the QL. For a keypad version, some of the connections could be made via the two joystick ports. This would cut down on the wiring into the QL, especially if the keypad was made up as a row of keys running along the back of the machine.

To get both F10 (SHIFT/F5) and Scroll Lock (CTRL/F5) (which I have on the full keyboard) 2 CMOS switches have to be wired in parallel across the F5 connections at J11/J12. This is because it's not possible to steer the incoming signal with diodes and still leave a path for the capacitor to discharge through. (The charge eventually leaks away after about a minute and a half - cures keybounce!).

25 way screened cable (from Maplins) was used to connect the keyboard to the QL – it's tidier than ribbon cable. At the moment the keyboard is connected to the QL with a metre of this, and works with no problems.

I found that a useful guide for hard-wiring a keyboard is an old keyboard membrane. The two sheets are carefully peeled apart, the sticky sides covered with clingfilm and both halves photocopied. It's then easy to see just where each wire goes.
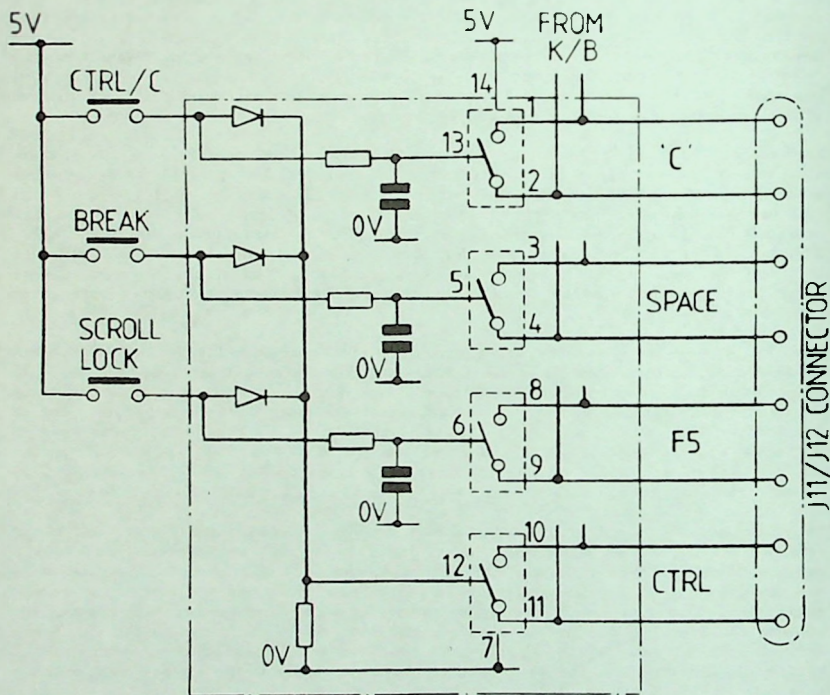
I.C. IS CMOS 4066 B
ALL RESISTORS 10K   ALL DIODES 1N 4148
ALL CAPACITORS 2.2u

As the table in Peter Rowell's article was specific to the OPD/TONTO keyboard I'm including a table which shows what the column/row connectors actually do. Connections are shown to the two membrane connectors on the QL board (J11 rows and J12 columns) looking at the front of the QL and numbering from left to right:

J11 COLUMNS

		1	2	3	4	5	6	7	8	9
	1									CTRL
J	2									SHIFT
1	3	F1	2	W	3	CAPS	Z		LEFT	
2	4	F2	Q	TAB	1	S	C	X	ESC	
	5	F3	E	R	A	F	B	V	RIGHT	
R	6	4	T	Y	D	G	M	N	SPACE	
O	7	5	6	I	H	K	.		UP	
W	8	7	U	O	J	;	"	,	DOWN	
S	9	F4	8	9	L	[	]		ENTER	
	10	F5	0	-	P	=	£	/	\	
	11									ALT

John Terry, 59 Dormer Road, Eastville, Bristol BS5 6XH
Tel: (0272) 516258

HARDWARE QUERIES - WITH SOME ANSWERS

Well I've been a QUANTA member now for over a year, and thought it about time that I put finger to keyboard and add my two-penneth, for what it's worth.

Like so many others, I was drawn into a "Quantum Leap" (JM) in the Spring of '85, only to see the price plummet a few months later when Sir Clive climbed aboard his C5 and pedalled off furiously down the M11.

Needless to say the first machine didn't work, but it's replacement, apart from the occasional lock-up when Quill's cursor won't budge, has never let me down. - (See P.S.)

As the years slipped by, I have added a Microvitec monitor to replace a TV, Trump Card with twin disks and an NEC P2200 pinwriter to complement my wide carriage Triumph Adler daisywheel and to enable me to dump from Easel and other graphics programs.

I have never professed to be able to program or understand electronics (keeping abreast with tax legislation is enough for me), and many articles in QUANTA magazine are way over my head as are the product manuals in many cases. I suspect that I am not the only one; after all it took me at least 18 hours if not more of trials, to configure the printer driver and DIP switches on my TA, to produce my text without errors.

By now, you will have gathered that I'm a perennial beginner! It's not that I wouldn't like to be computer literate, but long hours of work and the demands of family confine me to being a "USER" as opposed to a "Tinkerer" or a "Tweaker". I am sure that without the support of QUANTA and a small group of suppliers, the QL would have been laid to rest long before now, because of its commercial incompatibility with generally available hardware and software regardless of its sophistication as a multi-tasking machine. I applaud you all!

Although the majority of my computer work entails word processing (Quill), I have recently found it necessary to purchase "Conqueror" to run an MSDOS application software program. Available to me also, is some educational PC software for my young daughter which is unfortunately on 5.25" disk. Does anyone have a reliable 5.25" DS/DD single drive, preferably switchable 48/80 track, that is surplus to their requirements and at a reasonable price?

Now comes a problem for you buffs. Having pawed through a stack of "QL Worlds", the indefatigable Dennis Briggs tells me (March '89), that my 768K Trump Card will not support more than the two drives which I wish to at present retain. I supposedly could, if it's possible, load the 5.25" into a RAM Disc as long as there is sufficient memory to take it, uncouple the drive, plug in the 3.5" and copy to it. - Sounds a bit iffy to me! OR, could a switchable interface/connector be put in between the 1st and 2nd drives to couple in the 5.25"? If so, can anyone give me a comprehensive components list and assembly instructions?

{Since Leighton Davies, runs a setup similar to what you are looking for, I asked him for this information. Unfortunately, he has written direct to you, but has forgotten to supply me with a copy for this magazine. Hopefully for next month? Since Terry Harman, had done a splendid job on your next queries, I decided not to wait for Leighton. SJ}

I decided to tidy up my system and sent for the KBL 128 box on offer in March edition of QL World. It duly arrived two days later in the same post as my QUANTA magazine, in which I found a useful article by Peter Rowel (QMAS) on installations for these boxes.
Some questions sprung to mind however:-

1. Can one use any of the advertised plug-in uncased Hard Disks in this box with the ABC interface? Is it reliable and are there any problems with the unit? I haven't yet seen a review of this system or Miracle's.

Miracle and Rebel Electronics are currently the only hard disk system suppliers for the QL. The Rebel system or any other card that plugs into the 64 way expansion connector of the QL will NOT work with the Trump card. The reason is that the Trump card grabs all of the available memory slots up to 1 megabyte, except for the 16k ROM slot at the back of the QL. To make it compatible with Trumpcard, the Miracle Hard disk unit plugs into the ROM port at the back of the QL. The price you pay is that the loading and saving speeds are slower than that of the Rebel.

Rebel sell a hard disk system, either the interface on its own, or complete with drive, power supply, cables etc. It will support 2 winchesters up to 40 megabytes each, and both drives can be different capacities. It uses bog standard "IBM" ST506 MFM drives. I have tried numerous drives on the system, from a VERY old 10 meg full height job (complete with bullet holes), to a super wizzo high tec 3 1/2 inch 40 meg. They all worked a treat. Rebel loading and saving is about 10 times faster than a floppy drive. ie loading at about 150k/bytes a sec against 15 k/bytes for a floppy.

2. ST506 type - what are these types? - MFM, RLL - what do they mean? - ST250R, ST251-1 etc. etc. - which ones are suitable?

ST506, SCCI, ESDI simply means that the drive requires a ST506 OR a ESDI OR a SCCI INTERFACE to connect and use that drive with your computer. 90 % of the hard drives that have been/are being sold for the IBM and compatibles are ST506 type drives. The easiest way to tell the type is to look at the ribbon cable connectors on the back of the drive.
ST506.....One 34 way and one 20 way connector.
SCCI......One 50 way connector
ESDI......One 40 way connector

The ST506 drives come in 2 configurations.
1. ST506 MFM. This is the normal density drive. Ideal for the Rebel. Some secondhand ones on the market.
2. ST506 RLL. This is a higher density drive, the data being compressed by about 50%. No prizes for guessing that these drives are more expensive than the MFM's.

```
ST250R............ST251_1
```
This tells you the capacity and whether it is MFM or RLL

ST250R	(Seagate Technology)	2	(50 meg unformatted) (Rll)
ST251_1	(Seagate again)	2	(51 meg unformatted) (No R, so it's MFM)
ST213	(Seagate)	2	(13 meg unformatted , MFM)
ST225	(Ans on a postcard)	2	(25 meg unformatted , MFM)
ST138R	(Ho Hum)	1	(38 meg and it's an RLL Drive)

The 2 in ST(2)250,ST(2)51 etc usually means that the stepping rate of the drive is 65 m/secs. The 1 in ST(1)38R means it has a faster stepping rate of 28 m/sec to move the read/write heads from one track on the disk to the next one.

3. Do Miracle do a cheaper uncased HD without power supply?

No. (Not that we are aware of).

4. Do I need at least 30MB to support partitioning between QDOS and MSDOS?

Yes.
10 or 15 meg is more than ample for Qdos. I have 47 directories and over 500 files on my Rebel driven 10 meg winchester, and it is only just over half full. The problem is with the amount of space that many MSDOS suites require. 5 or 10 meg of disk space each is not uncommon.

5. Could I get the PCB's, twin 3.5's, 5.25, Hard Disk, Microdrives and power supply into the case or alternatively, as previously mentioned, have the 5.25 as an external on an interface/connector plugged into a fabricated backport.

Yes.
The question is, do you really need the 5 1/4 drive. If you only have a few MSDOS disks, it might be easier to get some kind soul to transfer them on to 3 1/2 disk using a program called Disc-over.

6. Would the Astec switched mode power supply (Roy Barber's helpful letter February) cope with all these, or what are the suitable alternatives?

Yes.
Most of the problems with the QL, Overheating, Locking up, Glowing in the dark etc, are caused by the original power supply. I use one of Dennis Briggs replacement QL power supplies to power the QL, Medic Board and Rebel board, and a separate power supply for the winchesters and floppy drives.
The advantages are :-
1) No need to modify the boards etc. Everything runs nice and cool and it's a simple plug in and go job. Roy's method means modifying the boards, and shoving in 12volts if you want to use the microdrives etc. Sorry Roy, but we're back to glowing in the dark again.
2) I have a separate on/off switch for the drives and QL. A small point, but much kinder on the system.

All information gratefully received, and I'm sure that reported comments would be appreciated by others in my predicament.

Finally, before I crawl off to bed at 3 a.m., many of my letters are held as a standard format _doc and one of my biggest gripes is changing dates, which are justified to the right margin, every time a _doc is loaded. Did I see somewhere that TK2 can hold a date for insertion in Quill_docs? If so, in what format is it – i.e. numerals or numerals and letters, and how is it done PLEASE?
{David and I tried this a while ago, but we were not completely successful with it. Has anyone else managed to do it? SJ}

Sorry that I can't get to the workshops although I'd love to come to bend an ear, get some tips and see just what can be done with the Queen's Language. Keep up the good work, it is much appreciated.
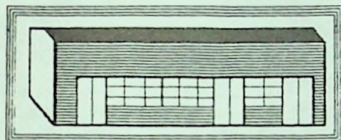
David Steward, 1 Green View, Hartest, Bury St. Edmunds, Suffolk. IP29 4DR
Tel: (0284) 830677
14.3.98

P.S. The *!?*?! cursor disappeared just as I was running back up the screen to do a final check. I switched off and went to bed!
{Thanks to Terry Harman for providing all the responses to Davids queries. SJ}

QUANTA - DESKTOP PUBLISHING - Chap. Three

We are now well on the way with our sheet having determined our project, decided on our heading, given our work a logo and considered our type sizes.

You will see that, this month, I have given you a logo from a sports club I belong to. The picture-a clubhouse-was drawn on screen pixel by pixel using the "Front Page" prog by GAP Software. The company developed the prog into "Front Page Extra 3 which required memory expansion. However, I found the original program, usable on a 128K QL, was ideal for my purpose giving me the close control that I needed to make the drawing.

This may sound like a sales pitch but, in fact, little has been heard of GAP Software for some while and, if the company HAS gone out of business perhaps the program could go into the Quanta library!

To return, having completed the drawing and taken a hard copy I then found it convenient to do a literal cut-and-paste job by reserving space on my sheet for the picture, typing in my text and then pasting the picture in position prior to photo-copying. There is an easier cut-and-paste mechanism in the Desktop Publishing software but more about that later.

All of this information may seem somewhat overpowering at present but the important thing is not to be too ambitious until you have understood the programs. You don't need to be a qualified printer to operate the software-most of it is common sense backed up by a little practice!

TEXT

The word simply refers to the words that you use in your material and it is fairly important to think about your wording as it must convey what you want to say. Be prepared to change your words, however, as you will reach the end of a line and find that there is insufficient space for the word that you intended to put in. You can leave a space and move to the next line or you can hyphenate but the presentation loses as a result. Pay attention to your spelling and, if you don't know, use a dictionary as your readers will have more respect for an article that is well presented.

Bear in mind that a solid mass of information is a lot easier to read if it is broken up into smaller sections and here we come to:

PARAGRAPHS

Paragraphs are a means of breaking up the text into separate sections each dealing with a topic which can be read and understood before moving on to the next paragraph. It is also a point where you can break off to have a cup of tea or whatever!

Dependant upon the available space you might leave an empty line between your paragraphs to give greater emphasis!

Drop-letters. Each of the chapters has commenced with a drop letter which is simply selecting a large QL size (3,1) for the first letter and then reverting to the text size (1,0 for this article) for the rest of the text. The first letter after the dropped letter will require positioning to look satisfactory but, from there on, all of the letters will position automatically as you continue to type.

Chapter 4 will deal with columns, editorials and the beginnings & ends of your articles.

What USE is It?

If, in a pub, or in similar relaxed circumstances, the conversation drifts, or gets
steered, to computers, someone, who does not use a computer, will quickly ask the
question: "What USE would it be to me?" That is a very good question and one, to
which it may be hoped, the collective membership of QUANTA will continue, over
forthcoming issues, to provide many more answers than are found at present in the
Library.

My most simple application, and most often used, is to save my address, for letters,
under 'adr' in Quill, with printer instructions for my FX-88 printer to print in Near
Letter Quality (N.L.Q.) and to set 'Design' so that the address appears on the letter in
a position which will be visible in a window envelope; thus avoiding the chore of
having to repeat the recipient's address on the envelope.

It so happens that for an envelope measuring 8.5" x 4.25" that the default value of
'Upper Margin' of three, suits my six line address, including the date, and positions
the recipient's address correctly by placing the recipient's start of address fourteen
lines down.

Instead of using 'Bold On' for N.L.Q. I use the vertical bar at the top right corner of
the QL computer keyboard to denote 'emphasised', the code for which, for the FX-88
is 27,69 or ESC, E in the 'translate' section of the printer driver. To use on a
multi-page document the vertical bar needs to be repeated at the top of each page or
the 'Bold-Off' in the printer driver can be deleted. A modest disadvantage of using
keyboard characters in the printer driver is that the printer no longer prints them,
their further use is denied, so characters not likely to be wanted need to be chosen.

Spreadsheet.
For Abacus I usually use the backslash, on the top right key, to print 'condensed'
which can give around fourteen columns, on the FX-88 printer, if the column width is
reduced from the default value of ten. The 'condensed' code for the FX-88 is 27,15 or
ESC,SI.

I have some small quantities of 'Privatisation' shares, the prices of which I like, at
the weekend, to log in Abacus. The top line is the date and the next line the Financial
Times Share Index of the largest one hundred U.K. companies (F.T.S.E.188) found in
many newspapers; line three is the percentage change from the previous week; line
four is the percentage change from some base date such as the ninth October 1987
(the pre black Monday price) or the first of January 1989 or first of January 1998 or
any other chosen date; line five is the first share price; line six its percentage
change from the previous week; line seven percentage change from ninth October 1987
or other base date and finally line eight which is line seven as a percentage of line
four; and so on for other shares; line eight can produce some dramatic numbers.
Over a period of time the data exceeds the capacity of the printer to list so that
deletion of columns is necessary. It is important to SAVE before deletions are made
and to avoid saving after.

Archive
I use this program for names, addresses, phone numbers and notes. It seems best to
denote most fields as 'strings'. If the phone number field is entered as a number the
first '8' is deleted and a space is not accepted between the area code number and the
subscriber's number; however a '.' is accepted.

Easel

I have taken some data already in Abacus like the FTSE 100 and converted weekly figures into moving averages before 'exporting' to Easel when the trend, if any, may be more easily seen. Because of the Abacus limitation to sixty-four columns, I like the dates at the top, there is a need to limit the moving period to something quite short like say five. To produce the moving average if the data starts in line B3 move the cursor to F4 and type 'row=sum(B3:F3)/5' press Enter and type the last space in which you wish meaningful data to appear.

Home Finance by Buzzz Software.

I use this proprietory program to keep track of domestic accounts. It works quite nicely but is limited to eight categories of expenditure. I hope to find a similar program but with more capacity. Home Finance is one of those programs which will not run on my internally expanded 512k (kilobytes) memory machine, I got 'at line 280 out of memory', but the QUANTA library came to my rescue with its SHRINK_BAS program. I find that on selecting 'five' that I am left with 328k of memory and Home Finance runs. The indefatigable QUANTA Quality Controller provided some crucial assistance in getting it to run.

Lockups.

Lockups seldom occur, perhaps due to the use of a surge suppression plug, £9.95 from Tandy shops, April 1990 price, or by mail order from Radio Spares, Corby, at nearly twice the price.

The Dentist's Waiting Room.

A few weeks ago while waiting my turn I read in a magazine of July 1986: "Those who happen to know are shockingly bad at remembering to explain properly to newcomers". As has been mentioned by our excellent QUANTA Editor many of the contributions to QUANTA are of a technical nature. It is to be hoped that authors bear in mind that some newcomers to QL computers will read what is written and find it USEful. For its future well-being QUANTA needs many new readers. It is all too easy for the expert to write in his own technical terms, which may not be understood at all by some readers. It is suggested that if an 'acronym', a word formed from the initial letters of other words, is used, that in its first use in the contribution that it is set out in full, examples are: Beginners' All-purpose Symbolic Instruction Code (BASIC), Common Business Oriented Language (COBOL), Control Program for Microprocessors (CP/M) and MicroSoft Disk Operating System (MS-DOS).

Reviews of Proprietory Programs and Peripherals.

Again sometimes the reviewer plunges into his comments with the implied assumption that his readers are already quite familiar with the subject matter. For new readers this may not be so. An opening paragraph setting out the intended USE of the program would be most helpful to many. Perhaps the review might finish with an example of USE.

Back to the Beginning.

There must be many USEful programs written by members within Abacus, Archive and Easel which have not yet been submitted to our Quality Controller, so what about fishing them out and posting them off? The indefatigable Quality Controller is overloaded already but they say: "If you want something done get a busy man to do it"; and he is thus supremely qualified.

William Hatty 'Wycroft', Vicars Close, Biddenham, Bedford, MK48 4BG.

AMIGA QDOS EMULATOR

I have recently received, direct from Rainer Kowallik in Berlin, the latest version of his QDOS emulator for the Commodore Amiga computer. This is version 3.83B and has been modified with the help of Rod Crookes for use with English keyboards. The previous versions were for use with German Amiga keyboards, and had keys Y and Z transposed, which can be lived with, but the German keyboards also have two extra keys which are not physically there on the British versions, one of which is the 'hash' key so its a bit difficult to write SuperBasic programs!

Rainer has also corrected a bug in his TAS replacer program. This program is used to replace the TAS assembler instruction in Machine code programs with an exception routine to emulate TAS. This is due to the fact that the Amiga's hardware prevents a TAS executing properly.

Does the emulator work, Yes, but with a few restrictions. Only screen MODE 4 is emulated, although there is a display if you select MODE 8, but you get only four wrong colours. The display is also distorted by being compressed in width, due to the differing number and size of pixels between the two machines. However, Rainer makes use of the Amiga's custom chips to emulate the display, leaving the main 68000 processor free to run QDOS. Result, well Quill runs about twice as fast (ignoring disk access time, see below) than on the QL.

The disk driver routine is extremely slow and shaky, but it works. Rainer requests help from anyone who can help with the CRC checksum routine to emulate the chip used in the QL disk drives. At present this means that while the Amiga can read QL disks, the QL can not read a disk one the Amiga has written to it, so take care!

Rainer has given me permission to give copies of his program to anyone in my user group who would like a copy. So if you want a FREE copy, you can get one from me. Because the Emulator uses code that originates in either QDOS or in the Disk Driver software, if you wish to receive this software you must include on one of the floppy disks you send me a ROM Image file from your QL as proof that you have purchased (when you bought your QL and disk drive) the right to use QDOS and FLP disk driver software.

To create a ROM Image file use:- SBYTES FLP1_ROM_Image,0,48*1024

To get your Emulator send me TWO 3.5" floppy disks with the file described above in a jiffy bag with a return label and postage and I will copy the programs FREE of charge for QUANTA members personal use only.

Melvyn J. Pearce, 21 Hall Meadow, Wedges Mills, Cannock, Staffs, WS11 1TB
28.3.98

RE-INKING PRINTER RIBBONS ON DOT MATRIX PRINTERS

Some time ago it was suggested that we could re-ink our printer ribbons by inserting little pieces of sponge into the exit and entry slots of the ribbon cassette into which was injected tiny quantities of "Stamp Pad Ink". However, some of you who tried this on a dot matrix printer may, like me, have encountered an unfortunate side effect.

After doing this for a while, one and then two, and finally, all of the pins began to stick and leave gaps in the characters formed until it was impossible to get a decently printed letter. At first I tried to free the pins by the discreet use of switch cleaning fluid but to no avail. The print head was wrecked. After a number of phone calls to dealers I finally realised that spare print heads for the Centronics GLP are not available. I gather that, if they were, I would be paying out around £50 for a replacement. I finally gave up and bought myself a brand new Star LC10, and what a super printer it is to. The old GLP was stacked away on a shelf. I hadn't the heart to throw away an old friend.

Months later I mentioned this to David Johnson. he said, "Have you used a water based Stamp Pad Ink?". The pins have all gone rusty. There's nothing you can do. The print head is probably scrap". However, thinking about David's remarks, I remembered everybody's cure for rusted joints. If this has happened to your printer this is what you can try.

Open up a ribbon cassette, throw away your little bits of sponge and spray the ribbon with a generous quantity of WD40. Enough to saturate the ribbon but not enough to run out of the cassette and soak down into your printer works. Put the lid back on the cassette, refit the ribbon, and sit down with a large quantity of scrap paper. Set the printer to the test sequence and feed in sheet ... after sheet ... after sheet ... of paper. The first sheet or two will look a mess but slowly it clears and, if you are fortunate like me, the pins slowly come free and eventually the print head returns to its normal performance. The cure is so simple I could kicked myself for not having thought of it before. But then, I would never have got my Star printer ! After this always use oil based inks. David tells me that 'Ribbon REFRESH' at £8.95 a can from Caspell Computer, at Unit 2A, Sterte Industrial Estate, Sterte Road, Poole, Dorset, BH15 2AF, is all right. I have just received a can but I have yet it try it out myself.

The Star LC10 Printer and Quill
The experts say that you can't get proportional printing with Quill. If you have a Star LC10 it is possible. Switch off the printer power and, with the 'Print Pitch' switch HELD down, switch the power again. With the printer off-line select either pica or elite with proportional. The printer will now print Quill in proportional style. Alternatively, hold down both the 'NLQ Type Style' and the 'Print Pitch' switches down when switching on the power and you can select the NLQ style to suit yourself including italic, all with proportional printing. The manual says that the printer will not respond to software commands in this mode. However I have found that the embedded commands in Quill are still obeyed. Be careful not to duplicate NLQ commands. If you want to use the printer setting mode leave Quill in draft. In this mode I usually set the left margins to suit and the right margin I put at column 82 in pica, and 92 in elite, because the proportional printing will shrink the lines as it still obeys Quill's setting of the wrap round points. Of course if you are using tabs you will get funny effects as the tab points will vary in each line. I am still learning new ways of using the LC10 it has such a wide range of functions available. Incidentally, if you browse through Computer Shopper you can get one for as little as £122 plus VAT.

Tony Owen, Little Gables, Stowe by Chartley, Stafford, ST18 8LD.
Tel: 0889 271876
11.4.88

SUPERQBOARD

Many thanks for printing my plea for the SuperQboard PAL program in the last issue of QUANTA. It produced no response except two enquiries from people with similar problems! Fortunately Michael Cronsten sent the required over the wires from Sweden and I now have my SuperQboard back and working.

I'd like to, through the pages of QUANTA, publicly thank Tony Firshman and Keith Mitchell for all the time they have put in on the repair over the last six months, particularly as they have very kindly charged me much less than the commercial rate for their time.
Steve Meech
22.2.98
(Sorry for the delay in printing this, it was lurking on Tony Firshman's bulletin Board, and I am a novice at down loading from this. Having now managed it once, I will try and keep an eye on it for any further messages from anyone. SJ)

EMBEDDED CODES FOR USE WITH QUILL AND THE EPSON FX-88 PRINTER

Although this subject has been mentioned before in QUANTA, I do not think it has been gone into in much detail. Perhaps the information given below may be of use to other computer illiterates like myself.

These codes are explained in the printer Operation Manual 82.11-12.
With few exceptions the codes all start with ESC = CHR$(27).
This not the ESCAPE key.
To obtain CHR$(27) press   CTRL; together. Screen prints 'uç^'.
The decimal value of 'uç^' = 155. However, 128 is automatically substracted from decimals >= 128. So 155 - 128 = 27.

Note that the 'uç^' - normally an unprintable character - is printed by a subterfuge. Type u CTRLSHIFT9 ^. The second character gives 'c cedilla', whose decimal value = 136 - 128 = 8 Code for backspace.

Set form length 12" p3-67	long paper = 72 lines at 1/8" line spacing. This is the spacing that the Epson takes for setting the form length. If you set the paper top edge level with the tear-off bar, the first printing is on line 5. It is, therefore, necessary to set F3 D page length at 5 lines less than the form length. Then, when typing is completed for the page, pressing "ON LINE" "off" followed by "FF" will bring the tear off perforations to the top of the tear-off bar. For 72 line page CTRL; C H, H = decimal 72. In practise do not leave spaces between adjacent code characters.

My install_bas for Taskmaster (Quill, Abacus, Easel, Archive) has condensed pica set in the Preable (ESC,@,ESC,R,NUL,ESC,!,EOT), so that all Abacus printing, including the borders top and left appear in this type. Consequently, if Elite, or other than condensed pica is required for a document, it needs the type to be coded in.

```
Line Spacing              CTRL; 0 (1/8")
p3-21 TO 23               CTRL; 1 (7/72")
                          CTRL; 2 (1/6") DEFAULT- does not need setting

Emphasised ON             CTRL; E
p3-70

Emphasised OFF            CTRL; F
p3-70

Enlarged ON               CTRL; W1
p3-96

Enlarged OFF              CTRL; W0
p3-96

Condensed pica            CTRL; CTRL/  / = decimal 143 - 128 = 15
p3-20                     Note that condensed cannot be coded direct after Elite type
                          has been in use. You must change to pica first like this.
                          CTRL; P CTRL; CTRL/

Elite type                CTRL; M
p3-84                     Some codes have alternatives, and there are many not shown,
                          or else given on the sheet prtest2, for double column printing.

Italics ON                CTRL; 4
p3-25

Italics OFF               CTRL; 5
p3-28
```

Details of how some of these codes are used are given in the attached sheet, which is in a two column format, which I find more acceptable for personal letters, than the normal. It is also printed in condensed type with smaller line spacing than usual, which enables more rubbish to be produced per page.

Of necessity, the attached sheet must be separate because of the different page length used.

I have recently returned from a 4 1/2 month visit to South Africa, where my wife and I spent our Golden Wedding. Whilst there, I spent a most enjoyable evening in November at the monthly meeting of QLSIG, the very lively QL group which meets in Johannesburg. A QUANTA member who is also a member of QLSIG, J. D. Fitzgibbons, has written several letters in the past to QUANTA. Surprisingly, I got from them the answer to a query I raised in the May, 1989 QUANTA, concerning the use of Taskmaster Files facility, to which no member replied. Why did I get "files still open" when I tried to copy a document to a second disk from a first one. The answer is that the disk has a "def_tmp" file in it. It can easily be deleted with Taskmaster's File handling facility.

Gil Lamb, Edifcil Carles, esc b atic b, La Massana, Principat D'Andorra
Tel: Andorra (33628) 35258
23.3.90

Dear Beginner,

All embedded codes are instructions
for Epson FX-80 printer, as in
Operation Manual 62.1:-12. Decimal
values for characters as given in
Concepts of QL user Guide.

Line 1 margin 5 Embedded codes, which
appear on screen but not on hard copy.
CTRL: C M CTRL: F CTRL: E CTRL: W 1
CTRL: P Paper length 72" page size
(F3 D) at 26. Sets pica, emphasised,
enlarged, line spacing at 1/6". "E"
of "EDIFICI" at 16. For paper length,
"H" = decimal 72.

Line 3 left margin 4. After
"D ANDORRA" the following embedded
codes. CTRL: F CTRL: W P CTRL: P CTRL/

page 1

space left for separate key presses.
In practice, leave no spaces.
CTRL: = "0" = decimal 155. 14 = 128.
128 subtracted giving 27 = ESC(printer
instruction - not ESC=FP key). CTRL/
= value = 147 - 128 = 15.

Line 7 - CTRL: P M CTRL: 1 - Sets
line spacing at 1/8" in Elite type.
sets left margin at 47 on the paper as
18 is 0. "*" is decimal 47, found by
experiment for the left margin of the
right column. For condensed type,
CTRL: P CTRL/ 1 > L margin at 62.
">" = decimal 62.
The first line on page 2 (line 7) must
be at one line less than the body of
the letter on page 1. so that the text
starts level with that line on page 1.

Line 1 - CTRL: = CTRL: P M CTRL: 1
CTRLESC
For condensed CTRL:= CTRL: CTRL/ CTRL:
L CTRLESC

page 3

required. without starting at the
beginning of the document. Without
the full instructions. the printer
would go to the default setting.

Line 1 - CTRL: P M CTRL: 1 + Same as
for page 2.

Subsequent odd and even pages first
line embedded codes as for 3 and 4.

Without page numbering to ensure
correct alignment of two pages on one
sheet of paper. it is essential at
the end of each page to take the
printer off line. and operate Form
Feed. before winding the paper back to
the starting point in the case of the
even pages. should you not have
pressed ENTER for a new line at the
end of the page. Otherwise, it will
print the last line at the top of the
page when you start the even page.
The printer needs to know it is

Cancels emphasised. cancels enlarged.
sets line spacing at 1/6" with
condensed type. T of Telephone at 46.

Odd pages left margin at 18.

At end of telephone number. CTRL: F
orit this code if the document is to
be in condensed pica, which seems
correct for this two column
arrangement. However, the print is too
small for showing in QUANTA, and Elite
has been used instead. L margin and
incent at 18. R margin at 47. For
condensed, R margin at 65.

Note that key presses at the same time
as CTRL are shown adjacent, with a

page 2

Sets the MSB to 0. sets line spacing
at 1/8" in Elite type. sets left
margin at 0 = 18.
CTRLESC = a value1 = decimal 128 - 128
= 0.
If you do not put in the CTRL: = you
cannot get the margin back to 18.
without a subterfuge such as switching
off the printer, or printing only one
odd and one even numbered page at one
printing. This instruction enables
you to print any number of pages (one
at a time) at one PRINT instruction
(F3 P ENTER ENTER ENTER) for the whole
document.

Note that Design(F3 D) for this layout
is set with bottom margin 1. top
margin 0. and 28 lines/page. The
install_bas has 72 lines/page.

Repeating the full instructions to the
printer at the top of each page
enables pages to be printed as

page 4

starting a new page when it prints
again. For the even numbered pages.
the printer has to be wound back to
the top of the sheet.

Embedded codes alone on a line cause a
line feed. These in a line move
characters on right to the left by the
number of embedded code characters
present.

crtest2b 50 04/27

ABACUS CARES FOR SHARES

The method described here is not exclusively for QL and compatible computers, but it can make the QL a useful tool for an efficient and quick control of investments in shares.

No regular user of the QL will have difficulties in using Abacus for getting a quick insight of company names of shares, their numbers, their rates on input dates, the sum of their values and that of the cash-deposit on the bank, and the percentages that they represent of that total sum and so on.

The problem comes when you want to evaluate your success if you are in a habit to, more or less regularly, take from or put money on your bank-deposit and exchange shares. To keep a clear eye on the total result of your investment policy, you could imitate investment-companies and give out shares. In this case of course fictitious ones. Say you have, on the date you start your system, a thousand pounds worth of shares and cash deposit in the bank. You could then imagine to have hundred fictitious shares each worth ten pounds. After some time, you have been very lucky (!), the total worth has risen to two thousand pounds, so that your hundred fictitious shares are each worth twenty pounds. On that moment you decide to take hundred pounds from your deposit. That is the same as five fictitious shares, so that the total number of fictitious shares of your investments is lessened to hundred minus five is ninetyfive shares. Each share still is worth twenty pounds, so that taking from your deposit doesn't influence your investment-success as shown by the worth of your fictitious share.

The essence of the system is that taking or putting cash from or to the bank is translated in 'selling' or 'buying' shares as in an open end fund.

At the right end of your spreadsheet with facts about your shares and bank deposit, you can to that end construct a small table as shown in the following figure of a part of a spreadsheet.

	R	S	T	U	V	W	X
1	....investments result....		fictitious value		performances of investment funds		
2	last date		dd 21-07-1989				% of the
3						price dd	price dd
4	dd 25-08-89		100.00		fundname	25-08-89	21-07-89
5	---		---		---	---	---
6	cashmutation	investment	cum. mutation		robeco	113.00	104.53
7	+/- guilders	dd 25-08-89	fictives		rolinco	112.60	105.53
8					aegon a f	37.50	105.93
9	0.00	7279.00	0.00		abn a f	78.50	104.11
10	---	---	---		asian tig	61.70	102.32
11	number fict.	value fict.	number fict.		bemco aus	67.00	110.74
12	dd 21-07-89	dd 25-08-89	after mutation		eur gr f	62.60	104.51
13					bogamij	115.00	107.48
14	72.96	99.77	72.96		interef500	43.80	105.04
15	---	---	---		venture fn	46.60	103.56
16	after cash mutation, set it back to 0!!!				royal aand	12.89	103.42

There are in fact two tables, one that does what's explained earlier and one that gives
a list of existing investment-funds. In the second column of this fund table, the actual
prices are input when you have updated your own shares and deposit; in the third
column these are divided by their prices on the starting date of the system (in this
example 21-07-89) and multiplied by hundred, so that they represent percentages of
the value at the starting moment of the system. In the first table is also chosen for
a starting worth of 'fictitious' (see cell T4 in the illustration) of hundred (guilders)
each. It proves that the private investments (see cell S14: 99.77) weren't so successful
as that of the funds, that performed between 102.32 to 110.74.

The following formula's are used:

.S12	"dd "+A3	.X8	(W8/35.4)*100
.T9	T9+if(R9=0,0,R9/S14)	.X9	(W9/75.4)*100
.W4	A3	.X10	(W10/60.3)*100
.R4	"dd "+A3	.X11	(W11/60.5)*100
.S14	S9/T14	.X12	(W12/107)*100
.S9	K20-if(R9<>0,R9,0)	.X13	(W13/59.9)*100
.T14	R14+T9	.X14	(W14/41.7)*100
.S7	if(R9<>0,"before mutation","dd "+A3)	.X15	(W15/45)*100
.X6	(W6/100.1)*100	.X16	(W16/11.69)*100
.X7	(W7/106.7)*100		

The rest of the cells are direct input or empty, cell R9 is there to input your
cash-mutation.

Cells W6 to W16 are to update the prices of fund-shares. Like the number by which
these are divided in the next column, they depend on the funds you chose as
comparison material with their prices on the starting date of your system. In my case
cell A3 is the input recent date, cell K20 contains the total sum of investments and
deposit. You have to change these cell references to your own spreadsheet-design. I
had to type these formulas over, the printing from Abacus gave a non-understandable
representation of the cell-parameters, does anyone know why?

There are a few things to be minded: first the system needs to be set (design
command) to working in columns instead of rows; second to input the formula's you
may have to temporarily fill in numbers in fields that are used by the formula's
(Abacus is in principle not a cybernetic system); third before a cash-mutation, update
your share-prices and deposit, after the cash-mutation finish it by mutating it to 0
(zero) (see also the next article of how in Xchange this is done automatically with
TSL). Try your system experimentally until you are sure that it functions as expected!

I hope the idea of creating fictitious shares will help to give more insight in your
investment performance and to earn back your investments in a great computer
system. Maybe making room for investing in new developments that for me are a small,
high density, fast reacting LCD colour screen, the implementation of optimised QDOS,
Xchange, both compilers and updated SuperBasic, Conqueror, more powerful, faster
(yes Thor and the Atari emulator are a good start but it can't go fast enough)
processors, perhaps a high density mode with all necessary colours, music and speech
synthesizer with its software, an inbuilt telephone answering/recording/fax/modem
device (no problem for a multi-tasker), a colour scanner and a mouse/digitizer system
and something to steer/control machinery, the whole thing of course with high quality
printer, plenty of memory and portable.

TSL or a new way to capitalism
After the method described earlier in Abacus Cares For Shares, now follows a description of how Easel is used to get a more long term insight in the development of your fictitious share (being the measure of your investment performance) and the fund shares used for comparison.

Beside the tables in Abacus a special column for export to Easel is created. In it the corrected worth of fictitious and standardised fund shares minus 100, to get the percentage differences in development since the starting date of your system.
Realise that the first cell in your column must be empty. During export from Abacus or import in Easel this first cell is used as a filename and so lost to us, as a usable fact.

After importing this file in Easel you are asked for an alternative filename, till now I named my weekly files f1 to f31. Everytime a new file is added, these accumulated files are saved, and next time merged with the new file. Merging in Easel is done by importing the file. I don't know how many files Xchange Easel will eat. Maybe the loading time of the accumulated files will be the bottleneck and force to thin out this mass of information.

A disappointment is that Easel is not very helpful with the different colouring of files. The total overview, except in format 8, is also not very sharp, the blocks overlap. A last problem to mention is, that to get a clearer view, you can delete files but not cut files to smaller ones to get a good view of the historic development of your fictitious fund share.

To do just that, the accumulated Easel file is exported and again imported in another Abacus sheet. You, so doing, create a historical database inside your share-monitoring system. When you want a more clear graphic overview, you can re-export the selected relevant information from Abacus to Easel.

An irritating point in this way of operating is that the time-axis develops from right to left. To get rid of this, I made a default screen that is first loaded in Easel so that format 8 is guaranteed, then import the latest update, after that the accumulated files are imported. When they show up I type in the name of the last imported file (eg f31) and rename the new imported file copy to f32 and so on. After a good look at all the figures, I decide if this gives me a hint to change my investment policy, we don't save, but export the contents for the next week or whatever cyclus you chose. This is how I used the rather simple Easel concept as a helping hand to Abacus.

When you update your system regularly, all this is very time consuming. Using the Xchange version of the Psion utility programs, the whole process can be fairly automated. With a printout of the TSL_doc it is a very simple procedure to make a TSL program with Quill as an editor. It helps when you first read the help file of the Xchange commands.

Be aware that during processing through Xchange with TSL you have to be careful to correct all typing-errors before entering, because after that, they are incorrectable. You could stop the whole process, start anew or do it manually, but that is time-consuming.
My TSL program goes as follows. Those after $c are comments.

```
[f3]naba[cr]ab2[cr][f3]l[cr]shares[cr][f5]a3[cr][esc]"
&d type date and Enter:
&i[f5]j4[cr]
&d type worth abn and Enter:
&i[f5]w12[cr]
&d type worth eur. gr. f. and Enter:
&i[f5]w13[cr]
&d type worth bogamij and Enter:
&i[f5]w14[cr]
&d type worth interef. 500 and Enter:
&i[f5]w15[cr]
&d type worth venture f. n. and Enter:
&i[f5]w16[cr]
&d type worth royal aand. and Enter:
&c and so on depending on your portofolio or interest in other funds
&i[f5]r9[cr]
&d type cashmutation and Enter
&i[f5]r1[cr]
&d to continue type £ or Esc:
&x £[esc][f5]r9[cr]0[cr][f3]sshares[cr][cr][f3]feey3:y15[cr]
cRAM1_tmp1[cr][cr][f3]q[cr][esc][f3]neas[cr]ea1[cr][f3]lsharedef[cr]fi[cr]RAM1_tmp1[cr]fi
shares[cr]v[cr][cr]r[cr]
$c TSL makes it possible to complete the cash mutation automatically
$c to zero
$c a direct export/import from a Abacus to a Easel program needs a
$c selection in the Xchange menu for which you have to make a few
$c keypresses; the risk that other Xchange programs are running
$c makes it impossible to program the exact number of needed
$c keypresses
$c to get the historic development from left to right we 1: load
$c sharedef, the default screen without further data, in Easel 2: $c import RAM1_tmp1,
the newest data 3: import the old, cumulated $c files named shares 4: export the newly
cumulated files under $c the name shares; (TKII gives automatically the default device
eg $c FLP2_, if you missed that device name) &d type newname for this set of figures
and Enter:
&i
&p 0v[cr][cr]feshares[cr][cr]feRAM1_tmp2[cr][cr]q[cr][f3]naba[cr]ab2
[cr][f3]fiRAM1_tmp2_exp[cr]c[cr][f3]ssharedat[cr][cr][f3]q[cr][esc]
```

Well, I hope this helps to make (more) use of two of the Psion programs and in case
the Xchange package is yours, of the Task Sequence Language.
J. Deenik, Gruttolaan 4, 2261 ev Leidschendam, Nederland
29.4.90

REAL TIME CLOCK the definitive answer

Over the last few years, there have been several designs published in these pages to
rectify Sinclair's omission of a battery to power the internal clock, when the QL is
switched off. Some of the designs work on some of the machines, some of the time.
Unfortunately, none of the designs work on my issue 6 QL more than 10% of the time.
The failure of these designs on my machine, spurred me into designing an external
clock that retained its time 100% on all machines.

I have produced a design which uses a separate clock maintained by its own rechargeable battery. The Real Time Clock (RTC) is completely uncorruptible, due to the clock chip using a serial interface. The RTC is initially set by copying the value of the internal clock to the RTC by using a simple SuperBasic command. The QL time can then be set with another command, usually in a boot file.

The board itself is plugged into the EPROM socket, so it must dislodge any EPROM present. An empty socket has been provided so that any EPROM can be inserted, with only one restriction; that the last 4 bytes of the EPROM are unused. TK2 and ICE EPROMs work with the RTC. The Clock chip also has 32 bytes of battery backed RAM, which can be accessed by two more SuperBasic commands, and could be used to hold default setups etc.

The RTC has been demonstrated at several workshops, with enough people showing interest that I have decided to start making the boards in small batches. If anybody is interested, please contact me. The boards will cost £29.50.

Phil Gaskell, 16 Tennyson Rise, East Grinstead, W.Sussex, RH19 1SQ.
Tel: 0342 312649.
7.5.90

TURBOQUILL MINUS

After telephoning Athene Consultants (the name may be slightly different now) to be sure they were able and willing to update my Turboquill (for Quill v. 2.3) cartridge to a Turboquill Plus disk I sent them the cartridge with covering letter and cheque for £5.75 in August 1989; no attempt was made to keep a copy of the program of course as the new version was going to be so much better. The result is that I now have neither the original nor the updated version in spite of having paid for both. I have written three times and phoned about six.

They recount a tale of several sorts of woe - their (only) QL has been playing up, they have the disks ready but don't know which version is which (never mind, we'll send them both, don't bother to return the wrong one), the QL is under a heap of other things and they can't find it, they are snowed under with orders (for other stuff). This is very disappointing. They promise every time to see to it "right away" or sometimes "straight away", thus renewing a short period of exponentially decaying hope at this end. It would be churlish to shout down the phone as I can see him hanging his head in shame, and pointless considering the poor dynamic range of the lines.I wonder whether others have been similarly served by Athene whatever they are.

(We have had exactly the same response from Athene. SJ)

Formatting from within Quill

During one of those awful spells when nothing will work and my large disks were unrecognised even by the old trusty Y-E DATA drive I found that "Format" seemed to be rather more powerful, or have a better chance of succeeding, when used from within Quill (commands II, files, format) than in Superbasic; using "Taskforce" it is very easy to go from one to the other and of course there are much fancier programs which do similar things.

The same thing had happened some time ago when one of my microdrives would only format from within Quill. The microdrive trouble was diagnosed by Dennis Briggs over the telephone as a failing ULA and he agreed that a ZX microdrive on its "Channel Island" longer ribbon cable could be used instead provided the 1 and 2 pins in the internal connector were bridged. There followed a general shuffling of these devices, MDV#2 from QL#2 becoming MDV#1 in QL#1 and the ZX one #2 in (outside) QL#2. But the stronger formatting from Quill seems real. Why?

"I'm not going in that box"

Buying all these bargain bits of computers has another price; you have a sprawl over the desk surface with lots of wires and ribbons. Attempting to make the system more compact I threw together (bandsaw, plywood, Evostick) a box on which to stand the monitor with a shelf to hold the drives and space beneath for the drive power supply (and the QL one). To avoid wear on the edge connector of the 5 1/4" drive I sought a socket equivalent of those i.d.c. plugs which are so easy to fit and save all that soldering.

The idea was to fit one near the disk interface end of each drive ribbon, so that the plug leading to another drive could be fitted very simply and files could be transferred from any one to another. They do not seem to exist, but the function can be achieved by having a short plug-to-plug ribbon connector and using the 68 pins from two (straight) printed circuit-mounting sockets, which may be pulled out with pliers. When they are poked into a plug it becomes a socket – the nomenclature is a bit confused here; it is actually more a plug than the "plug" which is to fit it, but it simulates the component normally called a socket. The rows become transposed so it has to be done twice to restore "red" to number 1 contact.

The first thing you notice on connecting up is the mass of ribbon cable and this will obviously have to be re-jigged. All this is of course unnecessary if your system is permanent, when you can set up any number of drives with switching a la Leighton, but mine is dismantled and transported fairly often and there is a lot of shifting of drives from one QL to the other. And much settling down afterwards.

The 5 1/4" drive will not work on the shelf, but works normally in its old place on the desk to the west of the monitor. Seven or eight times the drive has been put back on the shelf next to the well-behaved 3 1/2" one and again will not work. It is obviously a cable-routing effect and may vanish when the ribbons are shortened. I can't believe the monitor produces strong enough magnetic or electrostatic fields to interfere. (*Leighton Davies found some monitors interfere with certain drives SJ*)

The Y-E DATA drive has a socket for a resistor pack marked with the (correct?) value 150 ohms. But I was advised that the highest value which still allows the drive to work should be used (why?) When it was first set up it would not work without resistor but did with 150, 330 and even 1000ohm packs so the last was fitted. Remembering this after a recent spate of "seek error" and other fault messages I found that replacing the 1k by 330ohms restored normal operation. But the value of the resistor pack does not affect the present problem; it will run with any or no pack on the desk and will not run on the shelf. My next idea was that the edge connector was being pulled at different angles (I know, nothing should be pulling anything) so then I tried a brand-new socket. Whilst doing that I noticed that parting the plug-pins-plug joints sometimes produces novel polarised connectors, difficult to re-connect but impossible to get the wrong way round.

This last effort still did not do the trick; in the box "dir" still produced "seek error" or "cyclic redundancy error"; oot the box, as we say in these parts, it gave the right result. The cable is long enough for this drive to sit on a board above the monitor. It worked there, whether the new ribbon connector was pulled gently down or up; with its power supply to its left or right or behind it or underneath it. It still would not work in the box.

Well, it works now. So much for the no-field theory. It worked anywhere except in the spot chosen for it, and even there if the monitor were slid forward about 3". It worked with a 2-drawer filing card cabinet vertically between box and monitor but not with an earthed rectangle of copper clad board....so if you use the same layout as a PC, with drives immediately below the monitor, don't be surprised if some of them won't work.

At last it is working in its intended position, with the monitor (wooden cased Chromographica) resting on the steel base tray of a Westrex machine dismantled for the bits as a home could not be found for it. I thought I should have to make arrangements for the wholesale supply of hacksaw blades to remove the 3" which stuck out at each side and the 5" or so at the back. Apart from this balcony the arrangement was much neater than before. In the event the side bits were hacked off by a combination of cutting and repeated bending - crude but final.

Quanta October 1989... Miscellaneous Problems

Many thanks to those who sent me help in various forms following my letter in October 1989 Quanta. I haven't yet been able to get everything to work - insufficient time I'm afraid. A short article had been prepared for Quanta about the solutions to some of my problems for the benefit of anyone else but during the recent troubles whilst making extensive use of "alt" and "enter" to repeat the "dir" command (entreaty in this case) I forgot that the last one had been "format" - so away went the files before I could grab the disk. The drive had only run for a second or two when I jumped on it - perhaps by reset - so when there is time perhaps something can be recovered.

Missing connectors

The joining (in parallel) of two side-by-side ribbon cables can be done, if anyone should wish to, by the plugs/pins method but it would be much easier if a proper i.d.c. "socket" were available. Another missing link is a "plug" like the end of the p.c. board of a 5 1/4" disk drive to which the edge connector fits, or like the bit of board which sticks out from an EPROM holder, preferably also with i.d.c. fitting to ribbon cable. Has anyone any useful tricks for this?

J D Butterworth, The Rectory, West Woodburn, Hexham, Northumberland NE48 2SG
Tel: 8434 278235

QPAC2, MINERVA, QTYP etc.

I've spent a few days 'playing' with some new 'goodies' on the QL, namely QPAC2 from QJump and the Minerva ROM from QView. I've not found any problems using these two excellent and complimentary products, other than with some programs compiled with Lattice 'C'; particularly MicroEmacs from the library. This locked-up while trying to close the 'emacs.rc' file at startup.

This problem only occurred with both OPAC2 and Minerva when the program was invoked by HOT_LOAD (or variant of), or EXEP, EX(EC) worked normally. The problem was caused by Lattice 'C' allocating its own stack space in its 'sub-job', and the combination of QPAC2, Minerva and using a QDOS trap requiring 'normal' stack space it just didn't have. The cure for this problem is to either re-compile the offending program with a stack size specified in the linker options (emacs_link) file, DATA 128 was adequate in this case, or to patch the job header. This is most easily achieved by LBYTES'ing the program into memory, then SEXEC'ing it back onto disk with the data size specified.

    a = alchp(127126) : LBYTES FLP1_emacs,a
    SEXEC_O FLP1_emacs, a, 127126, 128

Note: The size of your emacs image will probably not be 127126 bytes, as my version has 'optimised' memory allocation and screen handling code. This fix may apply to other Lattice 'C' programs.

I also use SpeedScreen and found its property of 'forgetting' about some window definitions when you type 'NEW' or 'CLS' was annoying. This can be alleviated by loading SpeedScreen before invoking TK2. The order in which you load such extensions as SpeedScreen, OPAC2 etc seems critical if you everything to work correctly, reading the documentation and some trial and error is the only solution.

Apropos the start of the previous paragraph, QTYP really is the most impressive and useful item of software I've seen for the QL, once you've used it its hard to image how you managed without it. If only all QL suppliers were as efficient and courteous as Qjump.

Having suffered like most QL users from occasional lockups, I decided recently to build the power supply described by Terry Griffiths in the August 88 edition of QUANTA. When he says you need a hefty heat sink for the LM338K regulator, he means it, otherwise thermal shutdown happens very quickly. This PSU, (together with the Minerva ROM ?) has made lockups a thing of the past.

Finally, the utilities I've submitted to the library, have now been made Minerva (& Thor ?) compatible by the inclusion of MT.INF traps to get the system variables, and the exclusion of key-row calls. There's also a new GREP like utility for those (like me) who can remember the contents of a file, but never its name.
Jonathan Hudson, Copse View, Priestlands Close, Woodlands, Southampton, SO4 2GD.
Tel: 0703 867843
26.4.90

WANTED

Metacomco 'C' compiler. ALSO details of conversion of CST RAM expansion for ROMs. I would assume that the conversion consists of little more than fitting appropriate address decoding, DIL sockets and possibly decoupling capacitors and pull-up resistors.

Dave Woodman,"New Ditton,"Furze Platt Rd,Pinkney's Green,Maidenhead, Berks. SL6 6NT Tel: 0628 770770 Ex 4399 (09:00-17:30++ Mon-Fri).

GENERAL INTEREST

41256 256K x 1 120ns. Available for $1.95 US Dollars at Microprocessors Unlimited, 24000 S.Peoria Avenue, Beggs, OK. 74421 U.S.A. Tel: (918)267-4961 Master charge/VISA. 720K 3.5" in 5.25 Mounting Hardware (ie 1440/1440) No power supply - just drive $33.00 US + S/H. From Digital One, 7601 Mentor Avenue, Mentor, Ohio, 44060 U.S.A. Best payment is by postal money order or phone (216) 951-8088. At the UK rate the RAM chips should cost only about £1.35 each and the 3.5" drive should be around £23.00 each (not bad for a new drive hey?)

Renato Zannese, 615 Roding St., Downsview, Ontario, Canada, M3M 2A6.

FOR SALE

QL membranes £5: 3 = £13.50: ZX8301 £10: zx8302 £10. Post free to Quanta members. Don James, Merseyside Quanta Subgroup, 3 Bernard Road, Birkenhead, L43 1TT.

FOR SALE

Rationalisation of software that I never use. All software original and legitimate, with manuals. All half price. Cosmos (3.5") £7, Eye-Q (MDV) £15, TechniQL (3.5") £25, Digital C SE (3.5") £25, Lightning SE (3.5"/ROM) £25, QPTR (3.5") £15, IDIS SE (3.5") £17, Supertoolkit 2 (ROM) £14, Ultraprint (MDV) £10.

Geoff Wood, New Zealand Embassy Iraq, New Zealand High Commission, Haymarket, London, SW1Y 4TQ.

WANTED

Help wanted -- I need information or circuit diagrams on modifying a QL to a battery memory back-up or preferably one using the 1 Farad back-up capacitors now commonly available. All costs will be refunded, or unused disks sent for payment, or whatever.

Gordon Bradley, B/F 235 Tasman St., Wellington 6002, New Zealand.

FOR SALE

Complete QL system or individual items. "Minerva" upgraded QL with Q1M1 mouse interface plus mouse and Schon PC keyboard £200. Miracle Systems 32Megabyte Hard disk, hardly used £300. NEC 3 1/2inch dual drives £100. Sandy SuperQboard with 512K memory £100. Philips colour monitor £150. Cost £1700 to buy, will sell the lot in one go for £900 or individually as above.

Software on hard disk includes Qram, Qtyp, Qsysll , Qpac I, Qptr, Text87 PageDesigner 1 and 2, Metacomco C, Pascal and Bcpl. Hisoft GENQL and MONQL. Desktop publisher 2. GST C. Inkwell utilities. Qualsoft terminal. All these come free complete with manuals with harddisk.

Crawford. A. Mathieson. 236 Laburnum Grove, North End, Portsmouth, PO2 6EU. Telephone 0705 495219 during daytime only.

FOR SALE
Tonto dual microdrive units available for Quanta members at £28 per unit.
EEC Ltd,

WANTED
Sinclair Macro Assembler or GST Assembler, also interested in a Fortran compiler.
Lester Wareham on 81-989-3522.

WANTED
Some while ago I decided that it was time I upgraded my QL with disks, and I aquired
a SILICON EXPRESS interface. This unfortunately arrived minus the instruction book.
Having attempted to get one from the manufacturers, with no success, I am hoping one
of QUANTA's members will be able to help with some information.
I am obviously prepared to reimburse any expense involved as I have had no success
in my own efforts in trying to format a disk.
R.A. Gower, 218 Lower Addiscombe Road, Croydon, Surrey, CR8 7AB

FOR SALE
Miracle QL Modem (unused) £28, The Heart of Gern Adventrure by PCBS £5.
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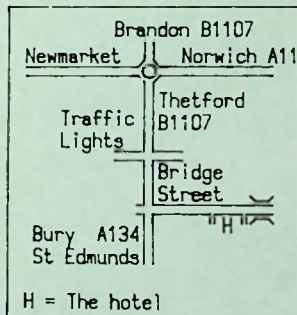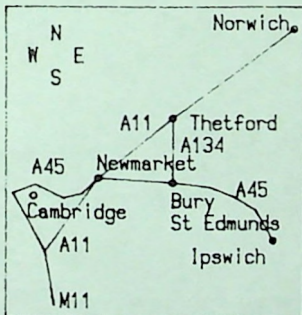
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