

QL Today

Volume 4
Issue 2
July/August
1999

ISSN 1432-5454

The Magazine about QL, QDOS,
Sinclair Computers, SMSQ...

SMSQ/E

QPC II

**First Q40 with
SMSQ/E Test
in this issue!**

**One
keyclick allows
you to switch
from and to your
favourite
operating
system!**

You can't win a prize by telling us what's behind this area - if you know it keep it as your secret and don't tell anybody else. If you don't know it, don't worry - be happy with QDOS & SMSQ/E on its own.

Contents

- 3 Editorial
- 4 News
- 6 Caption Competition
- 7 The Quantum Ring:
A QL Web Ring by Giorgio Garabello
- 8 US East Coast QL/TS May 1999 Show
Al Boehm
- 12 DIY_MIDI demonstrated at US Show
Al Boehm
- 13 West Coast Sinclair Show Tim Swenson
- 14 "Hey look it works!" Bill Waugh
- 16 My BOOT and Qascade David Denham
- 23 Gee Graphics! (on the QL?) - part 11
Herb Schaaf
- 26 Style Check 3 from Just Words!
Henry Orlowski
- 32 Missing Bits
- 34 Printer Control Codes - a dreaded
Subject - Part 3 Dilwyn Jones
- 36 Assembly Language Programming
- Part 6 Norman Dunbar
- 43 Adventures on the QL - Part 3: Squadies
Darren Branagh
- 46 You and Your Programs - just good
Friends? Part 3 - System Compatibilities
Geoff Wicks
- 47 QL Internetting Dilwyn Jones
- 50 Letter Box
- 51 Something missing?
- 52 Byts of Wood Roy Wood

Advertisers

in alphabetical order

Jochen Merz Software	28, 29
Just Words!	31
PROGS - Van der Auwera	19
QBOX USA	21
QBranch	10, 11
Quanta	51
W.N. Richardson (EEC)	39
RWAP QL Software	22
TF Services	35
The Library	6

QL Today

ISSN 1432-5454

German office & Publisher:

Jochen Merz Software Tel. +49 203 502011
Im stillen Winkel 12 Fax +49 203 502012
47169 Duisburg Box1 +49 203 502013
Germany Box2 +49 203 502014
email: JMerz@j-m-s.com

English office:

Q Branch Tel. +44 1903 200212
The Bank Volt Mobile +44 836 745501
6 Coronation Buildings Fax +44 1903 208070
Ham Road Fax +44 1273 381577
Sussex BN11 2NN email: qbranch@qbranch.demon.co.uk
United Kingdom

Editor:

Dilwyn Jones Tel. +44 1248 354023
41 Bro Emrys Fax +44 1248 354023
Tal-Y-Bont, Bangor email: dilwyn.jones@dj.softnet.co.uk
Gwynedd
United Kingdom LL57 3YT

QL Today is published bi-monthly, our volume begins on 15th of May. Subscriptions begin with the current issue at the time of sign up. Please contact the German or English office for current subscription rates.

Payment in DM (drawn on a German bank) can be made by either Cheque or Euro-Cheque. Payment in £ (drawn on an English bank) can be made by Cheque. Cheques should be made payable to Jochen Merz Software (German office) or QBranch (English office).

Credit Card holders may subscribe by either calling or sending their Credit Card number and Expiry date. Credit cards will be charged in DM (German office) or in £ (English office).

We welcome your comments, suggestions and articles. YOU make **QL Today** possible. We are constantly changing and adjusting to meet your needs and requirements. Articles for publication should be on a 3.5" disk (DD or HD) or sent via Email or into one of the JMS-BBS's. We prefer ASCII, Quill or text87 format. Pictures may be in _SCR format, we can also handle GIF or TIF to enhance your article you may wish to include Saved Screen dumps. PLEASE send a hardcopy of all screens to be included. Don't forget to specify where in the text you would like the screen placed.

Article and Advertising deadlines are as follows:

Issue 1: 30 April	Issue 2: 30 June
Issue 3: 30 August	Issue 4: 30 October
Issue 5: 30 December	Issue 6: 30 February

QL Today reserves the right to publish or not publish any material submitted. Under no circumstances will **QL Today** be held liable for any direct, indirect or consequential damage or loss arising out of the use and/or inability to use any of the material published in **QL Today**. The opinions expressed herein are those of the authors and are not necessarily those of the publisher.

This magazine and all material within is © copyright 1999 Jochen Merz Software unless otherwise stated. Written permission is required from the publisher before the reproduction and distribution of any/all material published herein. All copyrights and trademarks are hereby acknowledged.

Summer is with us again and many of us head out to the brilliant sun we're having (in Britain anyway) and the poor QL gets left indoors.

Pity, there's been quite a bit happening lately.

The Q40 is out and being used by many people. We got Bill Waugh to write about his experiences of acquiring a Q40 in this issue. Not all plain sailing by any means for Bill, but he got there in the end and seems quite proud of his new baby, as he rightly ought to be! The fly in the ointment is the colour drivers as ever. Work is happening sure enough, but taking far longer than we all expected.

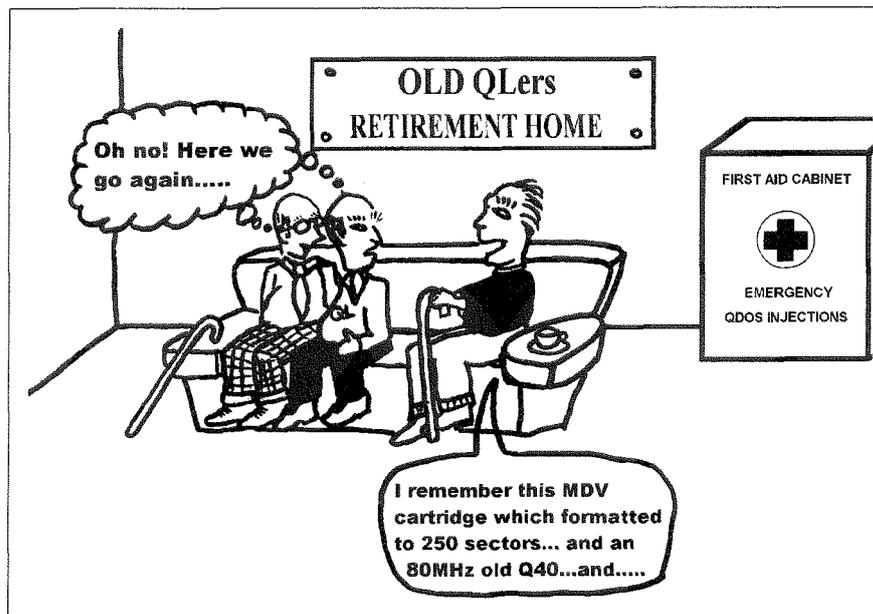
QPC2 is edging ever closer to release. I've been using a trial version myself for a while now, which seems to manage everything except printing to a parallel port! Impressive piece of software, I just hope it's finished and available by the time this issue is out, since the trial versions some people have been using are due to expire by August. Without meaning to belittle the other QL emulators on the PC, QPC2 is long awaited by many and the answer to many a prayer, a very fast and compatible emulator which happily lives alongside Windows and switches freely back and forth. Let's hope Marcel Kilgus comes up with the goods very soon.

The QL has been acquiring quite a presence on the Internet of late, so I decided to compile a list of QL-related sites I'd found on the Web. While writing that article, I came across details of a new facility, the Quantum Ring, a list of connected QL Web sites set up by Giorgio Garello in Italy - Giorgio writes about it in this issue. As more and more QLers get on the Net (look at the lists of QLers' email addresses avail-

able on the internet to see just how many) I hope to provide some coverage of what's happening on the Internet/World Wide Web in future pages. Roll on having a full Web Browser and Email software on the QL. We have 3 reports and pictures from the USA in this issue. While the number of QL shows in Britain have been few and far between this year, the Americans got busy and organised 2 QL shows in 2 weeks! One of the highlights of those shows was Simon Goodwin demonstrating a MIDI connection from the QL via the network port - it just goes to show what can be achieved even using a good old QL. Al Boehm brings us the news of this.

Phil Jordan is finally close to bringing The Library to reality and we'll have a dedicated QL PD supplier once more. Phil's had problems since acquiring Steve Johnson's library disks - he's had hardware failures and found the need to make many and sometimes extensive changes to the library to bring it up to date, but at last the catalogues are nearly ready at the time of writing this.

Finally, although the 'Embarrass The Editor' caption competition in the last issue didn't attract as many entries as we'd hoped, it still provided a few quite amusing entries. Who won? Take a look inside...



Cartoon

News

Bill Richardson

In order to use his garage for the usual purposes, instead of a repository for obsolescing QL parts Bill Richardson would like clear some of his older items which some of the less adventurous users might still be looking for such as Microvitec colour monitors, Dot matrix, and ink jet printers, ICs, Populated and unpopulated JS and JM QL boards, Keyboards, some with membranes, and Base mouldings etc. If you are interested ask Bill for his lists. You might just find a bargain!

Spell-Crib USA Version

Just Words! has published a version of the freeware program Spelling-Crib containing a QTYP dictionary with USA English spelling.

A copy of the dictionary in Digital Precision Spellchecker format is also on the disk.

Geoff Wicks, 28 Ravensdale, Basildon, Essex SS16 5HU, United Kingdom.
Tel +44-1268 281826

RWAP Services

The update to Release 2 of the SBASIC/SuperBASIC Reference Manual is now available cost ú6, or you can order this and either Release 1 update (needed if you bought a copy of the Reference Manual before 28/2/99) or pre-order the update to Release 3 at the same time for only £10. The support disks were last updated on 30/5/99 (Q-Index is now v1.02) - you can update to the latest version by sending £2 and the original disks to me.

Q-Help v1.03 will be released in the near future. This will include all of the latest keywords added to the Reference Manual and if

you can display screens in excess of 512x256, you have the option of displaying a second window at the side of the main text listing all of the help topics. You will also be able to move through the list of help topics by typing the first few letters. Updates to this latest version cost £1 - simply send an SAE and your disk.

ZX Spectrum Emulator News

from Davide Santachiara

ZeXcel, ZX Spectrum emulator 48k/128k which runs under the pointer environment is now free-ware. You can get it from Davide's homepage:

<http://www.geocities.com/siliconvalley/park/6533>

→ QL software → Spectrum emulators

or from Ergon Development's BBS area #55

+39 0522 300509 from 21:00 to 4:30 local time area zexcel.zip

The manual is included in Quill format.

Paragraph News

from Francois Lanciault

Work is progressing on v1.06 (the free one) and 2.02 (for registered users). The hunt for bugs continue and many have been solved (mainly when changing page dimensions, layout manipulation and table manipulation). Also I might be close to find a solution to the stability problems of Paragraph. For version 2.02, the following features have been added so far.

Configuration block. This is still incomplete as I need more information on how to handle some type of configuration.

Justification of blocks of text has been added. Previously, it was only possible to justify a single line or a single Paragraph. Now several paragraphs can be justified in one command. Landscape support is now available and will print on all printers. User defined

font size is now possible and more predefined sizes are available in the size menu. You can now see two pages at the same time on screen at 50% zoom. Useful for print preview.

I will also try to include other new features in version 2.02 such as:

Exporting block of text or whole document in ASCII, add a way to re-order the regions in a layout, Autosave to another (configurable) file name, and a new way to define regions dimensions.

But I must admit that most of the time I spent on Paragraph goes to bug resolutions these days. I really want the users to have a WP program that don't crash in their face more often than certain WPs on certain other computers...

Claus Graf Q40 Web Site

I have set up a Q40 web site. If you want to, check it out, please. It is

<http://www.q40.de>

It is still under construction, of course. Now that I have finished some pages and I have learned how much effort it takes, I really appreciate Thierry's site! So, please be patient.

In the program download area you can find:

* pqiv - a high color (!) image viewer for PCX and PIC files for Q40

* qsplayer - a small sound player for Q40 (sample file included) and others.

If you are interested in Q40-Linux, you can register as an Linux/m68 user. The registration helps to encourage and support the Q40 Linux port as well as the whole Motorola 680x0 series of computers:

<http://www.q40.de/os.html>

or go straight to

<http://www.cs.kuleuven.ac.be/~geert/Linux/m68k/>

Registration.html

Q40 Software News

There is a new version of QDOS for Q40: classic Beta n. You can find out about the improvements when you read the supplied readme file.

The highlight is the new Softrom Toolkit. It allows QDOS classic to be loaded from SMSQ/E.

You can get it from:

<http://www.q40.de/os.html>

or go straight to Mark Swift's site:

<http://pages.unisonfree.net/mswift/files/QZ/index.html>

Q-Celt Software

Q-Celt Software has released version 0.63 of the EasyBase database. This fixes some major bugs in the file import and merge routines - in particular, the record counter no longer becomes stuck at an internal count of -1 when merging to an empty database (e.g. when merging to reformat field layouts) and so prevents the scrambling of the database internal index leading to the scrolling of endless text to the screen.

In addition, some minor updates to the QL Traders example file and to display output have been done.

Q-Celt Software would like to hear from existing users who have ideas for any new facilities they would like to add to the program.

Upgrades to previous versions are available from:

Q-Celt Software, The Falconry, Glenmacnass, Glendalough, Co. Wicklow, Ireland

More News from Q-CELT

Q-Celt Software has now changed name to Q-Celt Computing to reflect the fact that we sell hardware now too. A forthcoming project from Q-Celt will be a pointer driven diary program for the QL, with possibly an art program as a longer term project.

The Library News

from Phil Jordan

The Library PD service is approaching completion.

I am currently finalizing the designs of the disk labels. I still have a large number of files to sort through and either add to THE LIBRARY, or where possible update earlier copies.

The catalogue disks are fairly close now, so I hope to have posted the outstanding catalogue requests before the next magazine comes out. I apologise for the delays.

It has been a longer than expected process to transfer Steve's massive Library to my system and change Names and Addresses as and where required. I hope the worst is now past and that THE LIBRARY can continue to grow and maybe some of the software writers will supply demos of their latest programs from time to time..

Phil Jordan, The Library,
42 Hawthorne Crescent,
Cosham, Nr Portsmouth,
Hants., England PO6 2TP

QPC2

Now, by the time you read this, QPC2 will be ready. After a long beta-test phase (which was quite good because a number of problems have been fixed) QPC is ready to be released. No tricky DOS-installation is required, you can execute it straight from Floppy Disk or Harddisk. QPC2 runs under Windows95, Windows98 or Windows NT. The only requirement: DirectX needs to be installed.

QPC2 can be executed just like any other Windows program, you do not need to reboot the machine. You can switch with ALT TAB between any windows application and QPC - it is THAT easy now!

A Demo version will be ready soon too which you can download from the JMS website, JMS BBS and from Marcel's QPC support site.

Useful Events

There were some reaction on Jochen's events article in the last issue. Discussions are still going on. It is clear that some programmers would like to see this being implemented, and some would like to have more events as well. It would be so useful if jobs were to be informed when the display resolution changes, for example. May we ask programmers not to use bits 6 and 7 of the event bits for the moment?

QL Hackers Journal

Issue 31 of QL Hackers Journal, a free electronic QL magazine, is available from Tim Swenson's Web site. It includes articles about his SuperBasic Source Book, Structured SuperBasic v2.6.1, FileConfig, Micro Emacs Macros and Program Internationalisation - what's that? Guess you'll just have to read it to find out. Tim's Web site is on

<http://www.geocities.com/SiliconValley/Pines/5865/>

Editor's QL Web Site

Your friendly QL Today editor has finally clicked his pointer on the Web. Yes, I am in the process of setting up a QL-related Web site. Point your browsers at:

<http://www.geocities.com/SiliconValley/Screen/3798/index.html>

At the time of writing in late July there was only a temporary page, but more material should have been added by the time you read this.

SET and ALTER

Really last minute news: George Gwilt has modified the very useful SET and ALTER instructions from the DIY Toolkit (Simon Goodwin) so that they now work perfectly well in SBASIC and Masterbasic. You will find the explanation and the listing in the next QL Today. Thanks a lot, George!



Caption Competition

Runner up in our caption competition on page 4 of the last issue was Phil Jordan with the following entries. Might have stood a chance of winning if he hadn't tried to cheat with multiple entries.

1. Is this a request from the neighbours?
A local council requirement?
2. Is it a bird, is it a plane, no it's the QL Today editor!
Able to jump small rivers in a single (Quantum) leap. I said it would work this time! It works, Y I P P E E!
3. If your name's Dilwyn you get a free pass, boyo.

Hmmm. Other honourable mentions from various entrants include the following:

1. Sensible street sign of the year award ceremony. The sign should have read "DILWYN: Please drive your PC carefully" He thought it read "DILWYN: Please drive carefully (into the ground)"

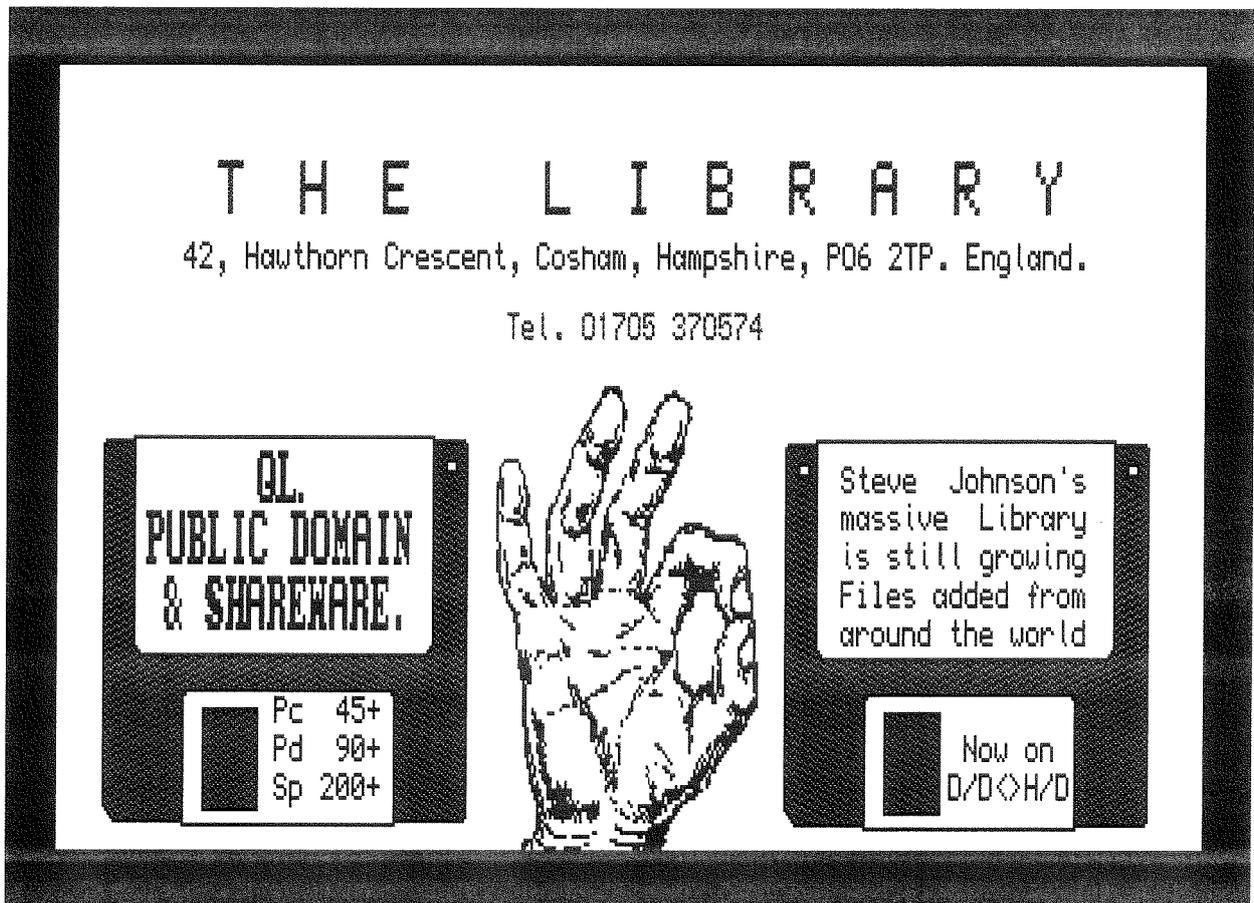
2. QLToday finally takes off in a big way. Welsh efforts to get into space not entirely successful. Practising for the return flight to Wales.
3. "I'd rather be editing QL Today..." "Why did my mother have to call me 'Dilwyn'?" Is this what he has to do to persuade people to write for QL Today

But our winner is John Wakefield with the following entries. A small prize is on its way to Worthing, England for his efforts, he won because his entry was the most QL topical and the caption for photo number 3 in particular had the Editor on the floor with laughter.

John wrote:

"Here is my official entry for the 'Embarrass The Editor' competition. My unofficial entry was far too rude.

1. Welsh road sign equivalent to 'SMSQ' (Stop Motorists Speeding Quickly)
2. Rush to get into the 'Queue For Tea' (you have to say it)
3. (QL) Quick Leek (one handed demonstration of UNZIP)"



The Quantum Ring:

A QL Web Ring by Giorgio Garabello

The Quantum Ring is a collection of QL Web sites linked to each other so that you can navigate back and forth through the chain of sites. Giorgio Garabello explains.

The idea to set up 'The Quantum Ring' was born in December 1998. Looking at a friend browsing an airplane-related ring, I was struck by the ease of browsing and information retrieval.

For who doesn't know what a Web Ring is: it is, in few words, a collection of web sites, linked to each other, with the possibility to navigate upward and downward through the entire chain.

Searching for rings discussing the QL, I found none, and so I asked myself: "Why can't I build one of these rings about this subject?".

My work got slowed down by a number of problems, so in the end only in April was I able to activate my own ring. Today, the ring is on, and it contains 4 sites at the time of writing.

Very important:

- This initiative has no commercial purposes (its only goal is the promotion of the QL)
- It is legal and absolutely free

The home page address is:

<http://www.fortunecity.com/skyscraper/perl/357/ringi.html>

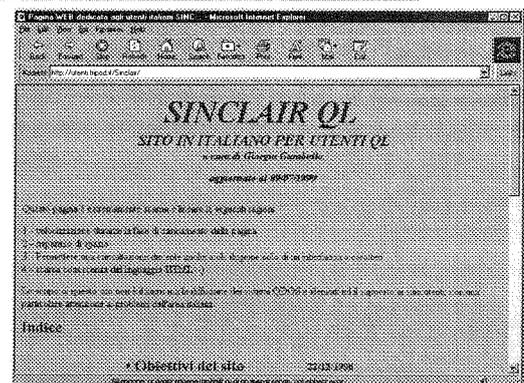
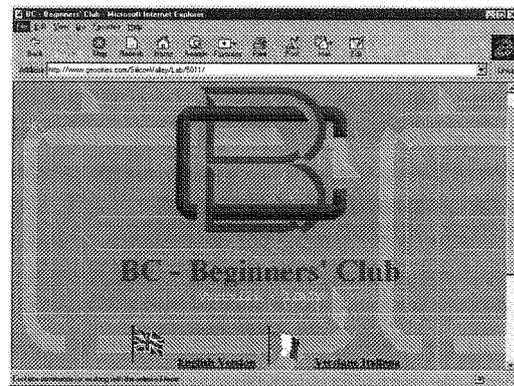
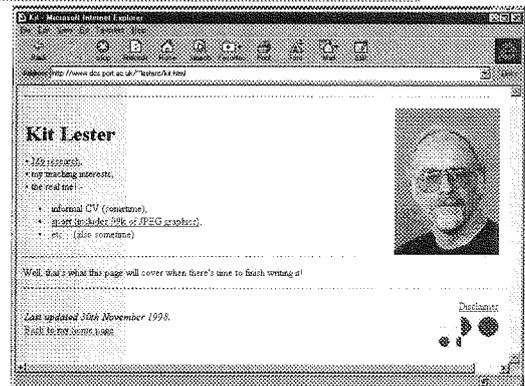
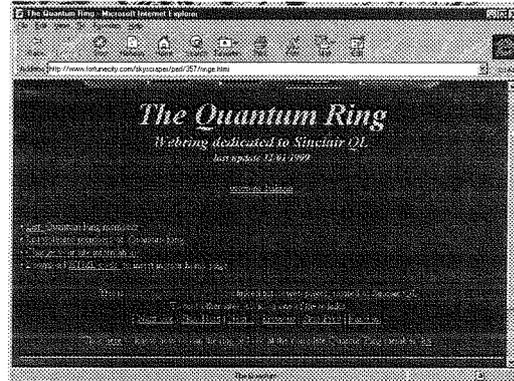
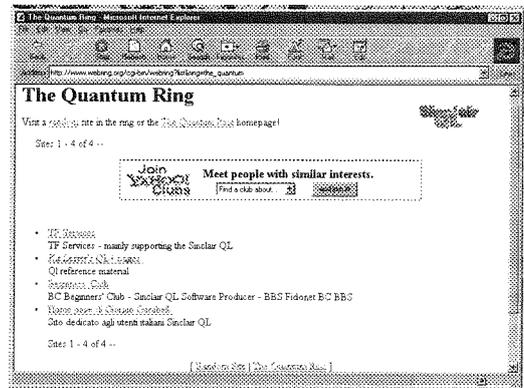
To join the ring (i.e. to add your own Web site to the ring) go to that page and follow these steps:

- Download a little HTML fragment and insert it into your page (if you can't find it go directly to: <http://www.fortunecity.com/skyscraper/perl/357/ringcode.html>)
- Copy this code into your page, in a noticeable place.
- Fill the submission form. (you will be asked to enter a password of your choice - please don't forget it !)
- You'll automatically be inserted in the potential member list.
- last but not least, when done, send me an e-mail, and I will officially insert you into the ring; in return I'll answer to your request and inform other ring members of your arrival.
- You could obtain some help from Tony Firshman if you are in trouble with all this mess.

Now it's my turn to ask you a couple of things:

- Please share this initiative as widely as you can
- Subscribe to the ring
- If you publish something, I'd like to receive a copy of your writings.

Giorgio Garabello, ql_torino@hotmail.com



US East Coast QL/TS May 1999 Show

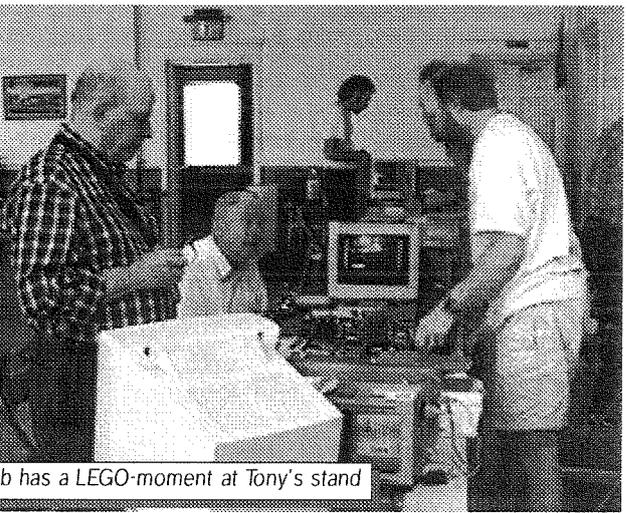
Al Boehm

The show was in Spring Lake, New Jersey, a beautiful ocean resort town with a boardwalk along a wide white sandy beach. Since most people have to come from great distances and have to stay overnight anyway, it was a 2 1/2 day show. On Friday evening we gathered at the Cobblestone Restaurant for dinner and general discussions.

On Saturday the show proper was held in a large church hall with a kitchen and coffee, tea, and sodas available all day long. Roy Wood, Tony Firshman, and Jochen Merz set up

The TS in the show title stands for Timex

Sinclair meaning the classic Sinclair computers ZX81, TS1000, TS2068, Spectrum, etc. However, very few TS persons showed up. I did sell two ZX81s at the flea market table.

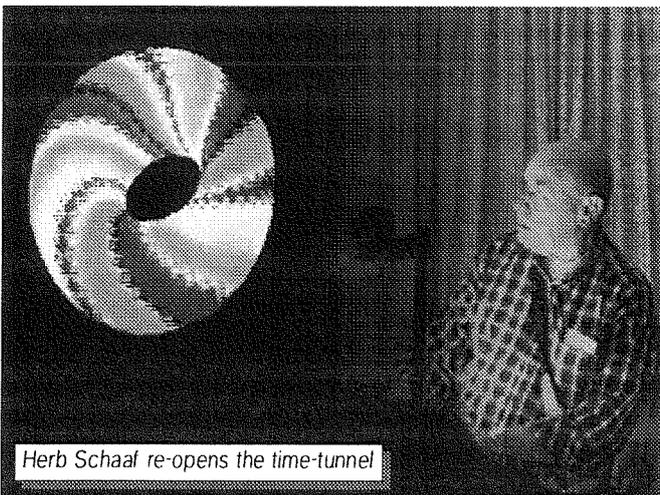


Herb has a LEGO-moment at Tony's stand

After a lunch of subs and pizza, we had an afternoon of tutorials and demos. The local host, Bill McKelvey, had set up a large screen on the stage with a projection system. First

in the complexities of the coding, and higher mathematicians pondered the subtleties of the higher dimension shapes. Rarely do you see the whole audience enchanted as they were with Herb Shaff's Graphics On The QL demonstration. Next there was the MIDI demo by Simon Goodwin and Al Boehm (See separate article.). In the last presentation, Dietrich Buder displayed the capabilities of his Memo program.

Years back, my daughter-in-law fussed at me for getting my son a QL since he stayed at it for hours and did not pay any attention to her. Ever since, I have pushed for extra activities



Herb Schaaf re-opens the time-tunnel

vender tables. Also there was a flea market table with used software, boards, some Sinclair computers, and a lot of printers to be had for very low prices. There was also a virtual vendors table that had catalogs, displays, and order forms but no person. This table included adverts for George Morris' Bible Study Helps For The QL User. That is, George couldn't make the trip, but his wares were on display. An important concept, I think, for the smaller vendors that can not arrange to come to all the shows.

Tony Firshman drew a lot of attention by showing the new Q40. Next Roy Wood, explained ProWess and Paragraph. Bill Cable presented a tutorial on Pearl and advocated its use on the QL. Then came a remark-



QL - The Musical



Bill McKelvey nets a bunch of Europeans for his first show

at meetings and shows for computer widows and orphans. Bonnie McKelvey led the families to some of the points of interest in the local area.

Saturday night we had a supper in the church hall followed by Rigel Cable performing some clog dancing. And then came the climax (nadir?) of the meeting with Liz and Ian Podraza and Al Boehm singing the world premier of:

The QL Fight Song

Chorus:

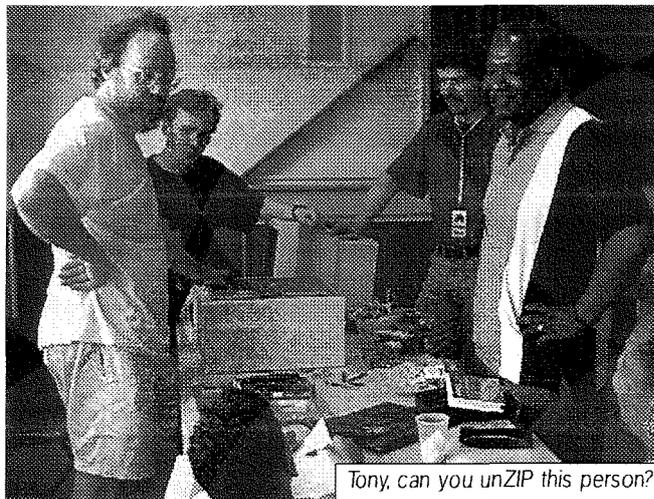
QL Forever.
We really think it's better.
Its OS is unique,
it rarely needs a tweak.
QL Forever!

1. Clive's microdrives were sectorized as loopers,
But a Miracle came in the form of cards Trump, Gold, and Supers!
2. It was hard to reserve mem'ry,
til we allocated heap,
Now we hardly get the message - Not Complete!
3. All the competition obsolesced to vapors,
But the QL lives forever In emulators!

Copyright Al Boehm.

QL groups are permitted copies for singing as long as proper decorum is maintained. Of course, TV, Radio, Movie, Stage, etc. rights are reserved. A MIDI file is available on the public section of the NESQLUG web site: www.airnet.net/boehm

ultimate question, "Where is the QL going?" they were clear that the QL needed a TCP/IP capability. Most thought this would



Tony, can you unZIP this person?

require a long software process, but Jochem Merz had heard of a possible cheap hardware solution.

Finally Saturday ended with a retreat back to the Cobblestone Restaurant for desert and a rehash of the events of the day. The local law is such that you can not purchase any alcoholic beverage at Cobblestone but

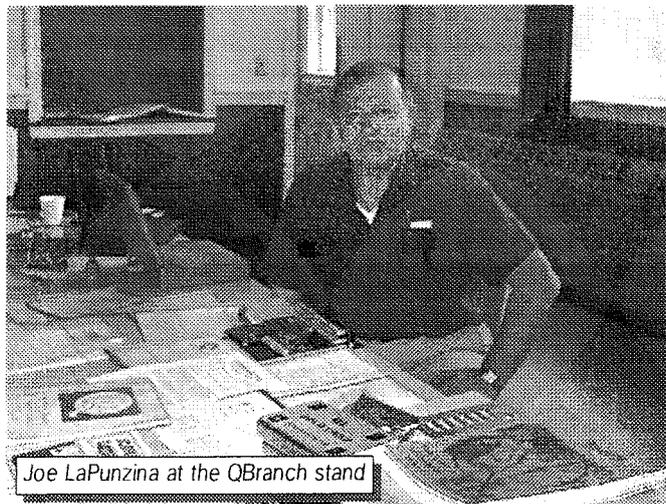
you can bring them in with you and the restaurant will provide glasses, ice, etc. But the liquor stores had already closed! Well if you can't drink a beer, then eat a banana split.

On Sunday, we congregated at the McKelvey's house where several QL's were set up, a telephone line was available for modems, and mysteries of the QL were exchanged. We had a very American lunch of hot-dogs and hamburgers cooked on an outdoor grill. Chris, a friend of Simon Goodwin, entertained us with a very impressive Egyptian dance. We ended the day by going down

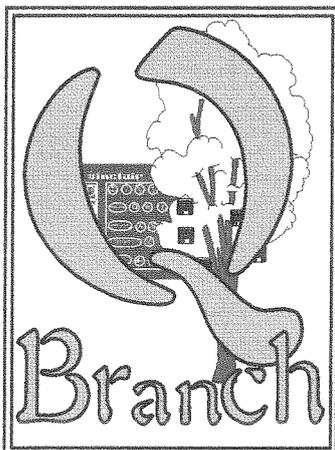
to the beach. By that time I was completely out of steam, but I think I saw Liz, Ian, Simon and Chris building a sand castle and a sand dike to keep the Atlantic waves from conquering their

castle.

[Pictures on the opposite page came from Al Boehm, the pictures on this page came from Joe La Punzina]



Joe LaPunzina at the QBranch stand



Shop hours :
 Mon - Fri
 10am - 6pm
 Wed / Sat
 10am - 2pm

Q Branch News

Since we are now well into the summer there is not much new happening but things should change as we move into the autumn.

The are many things being prepared at the moment but summer holidays and the lure of the sun take their toll of programming time.

Try to get along to the Paris show in September because that is where the more interesting things should happen.

See you all there then.

SMSQ/E

Gold Card / Atari / QXL Version

£ 76.00

Various Atari versions : call for details

QPC

£ 90.00 (£ 70.00 SMSQ/E Owners)

With CUESHELL Module :

£ 110.00 (£ 90.00 SMSQ/E Owners)

We can now supply colour laptops with QPC already installed ! The systems are secondhand and vary considerably so you will need to call for details but a typical starting price for a 486 DX 70 Toshiba with 350 Meg hard disk and 12 Ram complete with QPC and Carrying case is

£ 500.00 (+postage)

Standard Q 40 package consists of:
 Motherboard / 16Mb RAM / I/O card



Prices

Q 40 with QDOS Classic O/S	£ 330.00
Q 40 with SMSQ/E O/S	£ 360.00
Extra 16Mb RAM	£ 28.00
Floppy Disk Drive	£ 23.00
Hard Disk Drive	P.O.A.
In Tower Case (New)	£ 45.00
In Desktop Case (2nd User)	£ 20.00
Keyboard	£ 10.00
Mouse	£ 6.00

Prices do not include postage and packing.

PROGRAMMING

QD 98	£ 53.00
QD + QBasic	£ 69.00
QD + Qliberator + QBasic	£ 110.00
Qliberator	£ 50.00
Master Spy v 3.3	£ 30.00
QPTR	£ 37.00
Easyptr pt 1 & 2 (together)	£ 33.00
Easyptr pt 3 (C library)	£ 16.00
QMake	£ 18.00
QMon / JMon	£ 22.00
Basic Linker	£ 22.00
DISA 3	£ 37.00
QMenu	£ 16.00

SBASIC / SuperBASIC Reference manual £40.00

Update Sheets / disk from earlier versions £ 15.00

Postage extra : UK = £ 7.00 other places call for details.

New Versions New Prices

Don't forget you can pop into our shop in sunny Worthing and have a day by the sea too ! You can get disk drives and all sorts of computer peripherals as well as your QL supplies.

UTILITIES

QSpread 99	£ 59.00
Updates	£ 18.00
FiFi 2	£ 22.00
QSup	£ 32.00
Cueshell 2	£ 30.00
Qload / Qref	£ 15.00
Disk Mate 5	£ 16.50
QPAC 1	£ 20.00
QPAC 2	£ 40.00
QTYP 2	£ 30.00
QLQ	£ 32.00
LDUMP	£ 26.00
Q Count	£ 25.00

Text 87

£ 79.00

Typset 94	£ 29.00
Fountext 94	£ 39.00
2488 drivers	£ 29.00
Epson ESC/P2 drivers	£ 26.00

Text 87 is the only QDOS / SMSQ wordprocessor capable of handling the full screen on the Aurora / QXL / QPC systems. New drivers are currently being written.
 WATCH THIS SPACE !

'Just Words' by Geoff Wicks
 THESAURUS, STYLE CHECK, SOLVITPLUS 3
 £ 10.00 ea / ANY 2 PROGRAMS £ 18.00 / ALL 3 PROGRAMS £ 25.00

NEW VERSION --- STYLE CHECK 3
 THESAURUS V4.01 / SOLVIT PLUS 3 v 3.00

Pointer drivens versions of Geoff Wicks popular programs.
 (needs Hot_text, WMAN and PTR_GEN or SMSQ/E to run) **NOW ONLY £ 10.00**
 Upgrades from previous versions £ 2.50 + S.A.E.

New manual for Style Check 3 £ 2.00
 Spelling Crib : PD program £ 1.50 +SAE
 or Free if you buy all three programs

Q Branch

Feeling out on a limb?
Reach out for Q Branch.
Suppliers of Quality QDOS/SMSQ products
Hardware and Software.

The Bank Volt, 6 Coronation Buildings
Ham Road, Worthing.
W. Sussex. BN11 2NN. UK.

Tel +44 (0) 1903-200212 fax +44 (0) 1903-208070
email qbranch@qbranch.demon.co.uk web : http://www.qbranch.demon.co.uk

Q Branch

ProWesS

ProWesS	£ 48.00
DATAdesign	£ 24.00
Fontutils	£ 30.00
File Search	£ 12.00
PFlist	£ 12.00
Fontpack	£ 60.00
LINEdesign v 2.16	£ 24.00
PWfile	£ 18.00

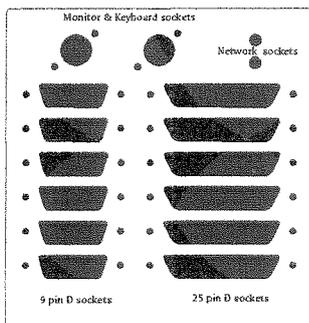
Paragraph

The ProWesS word processor



Demo version £ 1.50 + postage
Full Registered version £ 18.00

The MC - Plate



All the socket holes you will ever need on the back of your tower case. Just rip off the silly PC thing and screw on this one. No cutting needed. What could be easier?

Hardware

Super Gold Card	£ 160.00
Recycled Gold Card	£ 60.00 *
Aurora	£ 100.00
Qubide	£ 55.00
Qplane	£ 25.00
Aurora cables	£ 3.00
Aurora rom adaptor	£ 3.00
The 'Braquet'	£ 16.00

* when available.

There are currently available :

- 2 Used Gold cards
- 2 New Super Gold cards

QXL Supercharge Kit

We have a few 33MHz 68040 processors, etc. which we can fit to your existing QXL to increase its power and speed - call us for details

Package deals

QXL II + SMSQ/E	£ 220.00
Aurora + SMSQ/E	£ 160.00
Above package + Monitor	£ 380.00

Q Branch Programs

The Knight Safe 1 - standard version	£ 30.00
The Knight Safe 2 - with compression	£ 35.00
Q - Count	£ 25.00
Pointer driven home accounting	
Q - Route v1.07	£ 25.00
Route finding programme	

Coming soon !

Mark Knight's Fractal Programs.

Stunning animated fractals on your QL !

2nd user 14" VGA / SVGA Colour Monitors ! (suitable for Aurora)
Ready for use and giving all screen resolutions from 512 x 256 to 1024 x 576
prices start at £ 15.00 + shipping *Only a few left !*



We can accept payment by VISA, Mastercard and Switch. You can also pay by Eurocheques made out in Sterling or a Sterling cheque drawn on a UK Bank. Prices include Post and Packing in Europe.



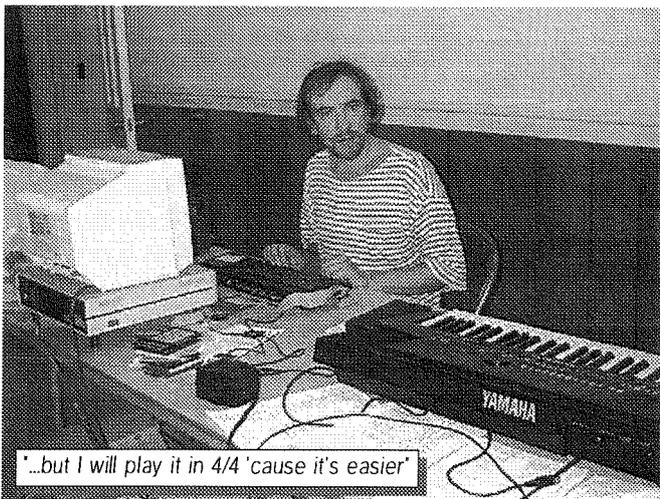
DIY_MIDI demonstrated at US Show

Al Boehm

Simon N. Goodwin, funded by NESQLUG (New England Sinclair QL Users Group) has developed a MIDI (Musical Instrument Digital Interface) capability for the QL using the NET port.

At the US East Coast QL Show on 29 May 1999, Simon had a Gold Card QL control a musical keyboard and play slow and rapid glissandos and other sounds. I (Al Boehm) had a Super Gold Card Aurora direct the music keyboard to play Twinkle, Twinkle Little Star as a single voice, then with harmony, and finally a rock version with drums.

The QL controls the musical keyboard with a set of new keywords developed by Simon. Only an inexpensive easily fabricated cable is required to hook up a QL NET port to a MIDI device such as synthesizer or a musical keyboard. One of the main keywords is: MIDI_NOTE [#Ch.] note% [velocity%] where Ch is the MIDI channel, 1 to 16, note% is the note number, 0 to 127, Velocity% is the keystroke speed, 0 to 127, which for most instruments is loudness.



[] indicate this parameter is optional, if missing the default is used.

For example, MIDI_NOTE #2,60,120 would start a note on the instrument sound (called a patch in MIDI) assigned to channel #2. For most instruments, 60 is middle C and 120 would be forte (loud).

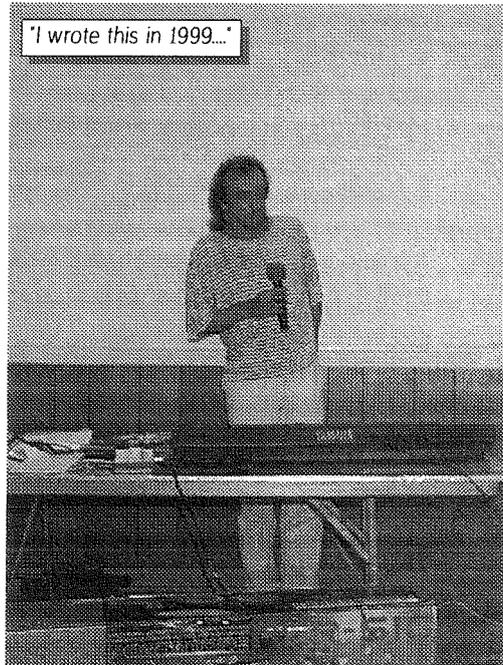
There is also MIDI_HUSH to stop notes, MIDI_USE to set channels, and MIDI_PLAY to send a stream of MIDI data. MIDI_RATE is used to tailor the transmission speed for Trump, Gold, SuperGold, etc. cards. Simon found a standard 128K QL is too slow but believes that if the DIY_MIDI codes were put in a rom it should work.

Also Simon has received the QXL NET code and is exploring how to adjust the DIY_MIDI codes to the QXL.

Also included with DIY_MIDI is a set of timing keywords useful for setting the right tempo.

DIY_MIDI currently only works as MIDI OUT, that is, the QL sending commands to a MIDI device. MIDI IN with the QL receiving commands from a MIDI device is much harder. Thus, the MIDI commands must be input to the QL via the keyboard either in real time by

pressing keys for notes or off-line by entering notes, rests, etc. into a music program (as yet unwritten!). Also the QL should be able to read MIDI files and then play them. (Also not yet written, but I am working on it!)



Bill McKelvey, the local host for the show, as a second job sets up equipment for bands and shows. He was excited about DIY_MIDI not for music but for using the MIDI commands to set his amplifiers, equalizers, (lights?) etc. for the shows.

Since NESQLUG funded the development of DIY_MIDI, it is for the exclusive use of NESQLUG members until 15 November 1999 when it will become freeware. If you can't wait until then either become a NESQLUG member (\$5) or beg Simon or me to let you have a beta version to test or review. Also I am looking for other QL music enthusiasts to take part in some of the development work of the programs that will use the new keywords. My email address is:

boehm@ziplink.net

West Coast Sinclair Show

by Tim Swenson, the show organizer

The West Coast Sinclair Show was held in Union City, CA, on 5 June 1999, one week after the East Coast Sinclair Show. Most of the European attendees arrived the Monday before the show and spent the week visiting San Francisco.

The day before the show was by Bar-B-Q at my house. Before the show a trip was made to a local regional park to show the Europeans a little bit of California nature. Luckily the side trip was enjoyed by all.

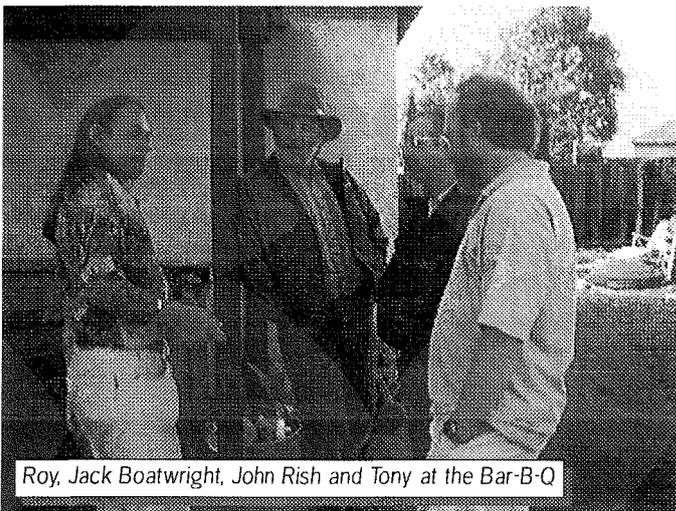
The attendees at the Bar-B-Q were: Simon Goodwin and his girlfriend Chris Lyle, Tony Firshman, Roy Wood, Jochen Merz, Marcel Kilgus, Dietrich and Inge Buder, Jim Hunkins, Don Waltermann, John Rish and Jack Boatwright. As evening fell, Simon, Chris, Tony, Marcel, and I hopped in the Hot Tub for a bit of a soak.

The day of the show I loaded up the station wagon QL stuff, picked up a few folks at the local Motel and headed for the venue.

As this was the first show I've organized, I was not too sure on how big a place to get. The venue was, shall we say, nice and cozy. There was enough room for the vendors, but not really enough for a lot of milling about.

The vendors were - Tony Firshman with his ever present QL controlled LEGO robot, Roy Wood demoing software on a Q40. Jochen Merz and Marcel sharing a table with their wares. Jack Boatwright was selling the last of the stuff from RMG. John Rish (the sole US

QL & Z88 dealer) had mostly Z88 stuff set out on his table. Don Waltermann had a Spectrum 128 set up for all to see.



Roy, Jack Boatwright, John Rish and Tony at the Bar-B-Q

Simon Goodwin tinkering on a QL (one of two) that had been given as orphans looking for a new home, by a QLer that had upgraded to Macs.



A cozy moment

Ken Harbit drove from Fresno to pick up some T/S 2068 stuff and went home with one of the orphaned QLs. Bill Miller and Terry Greenlee (formerly of the

Penninsula QL Group) made a surprise visit to the show.

The key visitor to the show was the renowned author Stan Kelly-Bootle, writer of many computer books, including the "Devil's DP Dictionary", and the holder of the first post-graduate degree in Computer Science (from Oxford).

Simon Goodwin has been a reader of Stan's work for a number of years (so have I) and considers him one of the few that have really mastered the English language. When I mentioned to Simon that Stan was coming to the Show, Simon's jaw literally dropped. Simon got to spend a few hours chatting with Stan, smiling the whole time.

There was no organized demonstrations or talks, just a whole lot of Sinclair talk going on. Since I was the organizer, I was not really relaxed enough to truly enjoy the show.

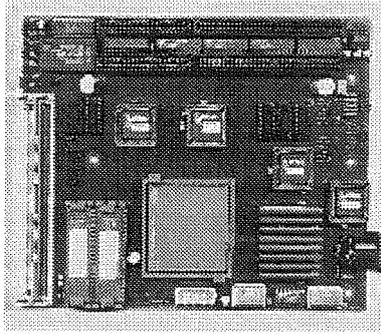
When the show ended at 5:00, there was a debate on where to have dinner was held. Originally, Tony and Roy were leaving for the Airport right after the show. Unknown to me, their flight was delayed 4 hours and they had time for dinner after the show. Luckily everyone agreed on a place for dinner and the restaurant easily handled a group of 13.

We are talking about plans for next year. We have just discovered a local "Vintage Computer Show" that would be the right audience to advertise our show. Hopefully we can generate more local attendees next year.

"Hey look it works!"

Bill Waugh

Bill Waugh looks forward to his new Q40, but is not so sure with his record of hardware assembly. He got it working eventually, but it cost him a lot in coffee though...



I greeted the arrival of the Q40 package from Qbranch with somewhat mixed feelings. While on the one hand I had been looking forward to its arrival and the prospect of Qdos running at Warp nine, the downside was that I also knew that my record regarding hardware assembly was a long way short of ideal, the trouble is that if you are not doing this sort of thing on a regular basis then you do not attain an upward moving learning curve, more a sort of switchback of success and failures.

However as the package arrived on a Saturday morning it gave me the whole weekend to get it installed in to a desktop case (nothing but the best for Hugh Forte). I had purchased at a reasonable price a new 2.2 Gig hard drive and 3.5 floppy; also in hand I had 16 meg of RAM from a previous PC upgrade, I wasn't too sure if this RAM was suitable for the Q40 so did not order the Q40 without RAM.

The Q40 package contained a manual, a cardboard box inside which was the Q40, an I/O board, a plate with ser ports and cables, 16 meg of RAM and a cute little laminated Q40 logo (to stick on your computers case).

First thing to do is read the manual, next thing is to realise that no matter who you are you DO NOT take in everything you read at the first attempt, fact of life I'm afraid, we all have some

dodgy RAM up there in the grey matter and the longer you have been around the more dodgy stuff there is up there so at my age (nifty fifties) I tend to read things a few times.

Ok several cups of coffee later and I'm ready to go. First, lay Q40 gently down into the case to see if the holes line up with the mounting posts in the case, no problem, three holes line up with brass stand offs on the case base and in this position the keyboard connector on the Q40 lines up nicely with the keyboard cable hole in the case; so if its going to sit in this position the next move is to see what all has to be connected and how.

POWER CABLE - power to the Q40 comes not from the usual PC power connector such as used by Qplane but from a hard disc power plug this is a problem as to get one of the plugs around to the Q40 socket is going to put some strain on the cable - Problem one. I remember that I have an extension to one of these cables in an old PC case in the attic, this turns out to be a good thing anyway as the extension can be plugged into the Q40 and any time I want to disconnect the power to the Q40 I can pull apart the cable this avoids putting any strain on the Q40 board as these cable plugs tend to be tight - Problem one solved.

I/O BOARD - it is recommended to push in the PC I/O board into the Q40 before fastening down the Q40 into the case to avoid putting excessive strain on the Q40 board, at this point I also connected the cables for the two ser ports and the video connector, instructions with the Q40 are quite explicit and getting these connectors plugged in the right way is not a problem, however you may want to give some thought to which port you want to make Ser1, why? well as it comes Ser1 uses a nine pin connector and Ser2 uses a 25 pin connector, if you have opted for SMSQ/E for your OS you will need a 25 pin to 9 pin adaptor to use Ser2 as the port for a mouse as SMSQ/E searches for a mouse in the order of Ser4, Ser3, Ser2 then Ser1 with a recommendation that you use the highest port available for the mouse, the easy way out is just to swap the Ser port leads on the I/O board thus making Ser1 Ser2 and vice versa, the problem with the 25 pin adaptor is that it is too close to the Video port and will foul the video connector unless you shave a bit of it somehow. In practise I found the mouse works ok in both ports but presume Tony Tebby has his reasons for recommending the higher one.

RAM - fitting the 16 meg of RAM into the Q40 is also not a problem it will only go in one way, I check at this point if the spare RAM I have looks anything like the RAM supplied, it is exactly the same so in it goes as well giving 32 megabytes of RAM surely it will be some time before I get an 'out of memory' report with that.

DRIVES - before screwing the Q40 board down to the case I connect the hard drive and floppy drive cables onto the

I/O card while I can still see where pin one is on the connectors, this is denoted on the card by a small white triangle at each socket, pin one on the cable is the red wire. Everything looks in order so screw the Q40 board down and put in the screw for the I/O card and the one for other socket plate. I had fixed the hard drives (one 2.4 gigabyte and one 1.2 gigabyte) and the floppy drive into the case sometime ago, all that was required was to plug in the cables following the convention red wire (pin one) to the end of the drive connector next to the power lead.

LEDS - all that remained were the wires for the various LEDs on the case, these are marked as to their use and the only thing left to work out is which way they go onto the connector, trial and error is the order of the day as getting them the wrong way around will have no effect other than they won't work.

POWER UP - time for the big test, I connected the minimum needed to get a working system, a monitor, keyboard and a power cable switched off at the wall socket, one final look inside the case, ok everything seems to be connected; take one large inhale and switch on at the wall - nothing! Switch on at the case - buzz from the power supply whine from the hard drive as it fire up and then those all too familiar and very welcome red white and black windows -- Hey it works!!!!

Yes it works! It's got the three channels look - umm - where is the cursor, I should have a cursor - Problem two!

The floppy light is still on and stays on, this is usually a sign that the floppy cable is connected the wrong way so switch off and connect cable with red wire away from drive

power supply. Switch on and the floppy drive light comes on will it go off? Yes it does and what's more I now have a cursor - seems the Q40 was so busy trying to find Flp1_ it did not want to communicate, I check that the floppy cable is the correct way on the I/O board - it is; so it seems that Sony like to make their floppy drives a little different. Problem two overcome.

Now that I have a cursor I can talk to the Q40. Wonder how much RAM it thinks it has; I type in 'Print free_mem/1024' and it comes up with 31447 so it has found a use for about 540 K (about four times the 128K of the old QL).

FORMAT - next step is to format the hard drives starting with the 2.4 Meg drive. I opted for SMSQ/E as I have got used to it on a QXL and then Aurora, so after going through the format commands that safely allow you to format a hard drive I get to type in 'FORMAT WIN1_' and enter. Immediately and I mean immediately the win1_ stats come up on screen, this can't be right it 's far too quick so I do a dir Win1_, it comes out at 2499805K, still suspicious I type in a few lines of SuperBasic and save it to Win1_sceptic do another dir and its there VIEW it and its ok - still suspicious (maybe some demon slave block quirk) power down then power up and load it in - yes it ok WIN1_ is alive and seems to be well, onto Win2_. I use the same commands as before and then format WIN2_ this time nothing (I just knew things were going too well) after several more fruitless attempts it was time for coffee and quite reflection - Problem three!

The coffee did the trick, the drive I wanted to use as Win2_ had been on my Aurora/Qubide

system and a previous drive that had been used on this system had proved difficult to format when put back onto a PC as a backup drive, I decided to try and format it as Win1_ on the Q40 and see what happened, after disconnecting the formatted Win1_ drive and setting the jumpers on the other drive to master I tried to format it, this time it worked fine and after changing the jumpers back to slave and re-connecting the Win1_ drive I now have two formatted hard drives on the Q40 - problem three overcome.

Mouse - I am of the rodent user type, so power down - plug in mouse, power up, the Q40 boots up very quickly but without mouse, try again but this time with mouse switched to PC (choice is PC - MS) - still no mouse and I must have a mouse, plan two try a different mouse several mice later no joy, I know you can use a computer without one but I can't remember all those hot keys, so must have a mouse, must have a mouse must have a coffee.

Two coffees later I can't think of any reason why the mouse won't work, so I decide to remove the I/O board and check the jumpers on it, there are probably a couple of dozen but they are positioned to give the impression of at least several hundred and the instruction manual (page) for the I/O board looks like it was written with the help of the Hubble telescope. Now in my capacity as an agricultural worker (honest we don't suck bits of hay folks) it is not everyday that we get to play with stuff like I/O boards, in fact anything that requires a hammer of less than two pounds is regarded as quite delicate and skilled work, so I approached this board of

several trillion jumper options with some respect and after some study with a magnifying glass between the board and its manual, I was sure everything was in order and plugged it back into the Q40.

After screwing the Q40 back down into the case and then screwing the I/O board plate down I spotted what was probably the cause of the mouse problem, the Q40 came with three rubber feet stuck on its underside in positions to support it, these feet were rather large and screwing the I/O plate down was forcing the Q40 board to distort and make bad connection with the I/O board, leaving out the screw for the I/O boards plate solved the problem. Tony Firshman has since sent me three smaller rubber feet these allow the I/O board plate to be secured. One last word on mice - if you are moving from Aurora to Q40

SMSQ/E then while an Aurora SER mouse requires to be set at MS, Q40 needs PC.

So now that I had everything working it was time to install some software and see how it goes, ProWess wouldn't work until Roy Wood advised that the Cache needed turned off while some of the Prowes extensions loaded, it pays to switch Cache on again as it gives a increase in speed by a factor of two to three, Other than the Cache problem and the fact that some SuperBasic stuff was missing most of my stuff worked fine, and the speed at which the Q40 booted up was very fast - about five seconds. Very shortly after the Q40 arrived an upgrade to the ROM was issued, this has slowed bootup a little as it has to be loaded in over the existing ROM, also some users reported a problem with slow Floppy drive

usage this attributed to a slave block problem.

My overriding impression of the Q40 is its speed, I think it is possible that you could boot up a Q40, exec Text 87 write a short letter and print it before a Windows burdened PC was accepting input, but there again I am biased just a little.

Is there a downside - well depends I think on how long it is before we get the Hi res colour drivers, I have been used to using Hi res screens with Aurora and QXL that I get a bit frustrated with 512X256 and Prowes does not look good at that resolution, however I doubt if Tony Tebby would have put it out without Hires in four colours unless he thought the colour drivers were close to completion.

Lastly I would like to thank Peter Graf, Tony Firshman and Roy Wood for there efforts in bringing the Q40 to market.

My BOOT and Qascade

David Denham

I have seen a number of articles about people's extravagant boot files. While it's possible to pick up some interesting tips from these, I'm a firm believer in KISS (Keep It Simple Stupid), so I thought I'd write about how I use my QL by staying in charge of my computer instead of it being in charge of my life.

I use a JS rom QL with a second hand Gold Card and a single DD disk drive plus a second hand Cub monitor I bought some time ago and a Canon Inkjet printer. I don't believe in spending lots of money on the system. I'm not rich, the QL does what I need it to do, so I'm happy keeping

things as simple as possible. I may have to upgrade to HD disk drives soon, as I'm finding it a little hard, not to mention expensive, to buy DD floppy disks at the moment. In the future I don't know what I'll do, I hate learning new things at my age, so I guess I'll keep the QL going as long as I can.

I have not always been a great fan of pointer environment, but it does have some merits, so I use it more often now than I used to and am gradually getting used to software like Qpac 2. The beauty of booting from a floppy is that if I wish to run a program without pointer environment e.g. an old program which won't run in pointer envi-

ronment, I just reset the QL with that different disk in FLP1_. I doubt that would be so easy if I had a hard disk.

I hate hotkeys and avoid them like the plague if possible. I can't remember more than one or two of them at a time and can't remember how to set them up either without looking in the Qpac 2 manual. I used them at first, but had to put a sticker on my monitor to remind me which key to use for which program. I hated that.

I came across the Qascade program a little while back and boy has it made a difference to my setup. Before it, I used loads of buttons and hotkeys for everything, or just typed in loads of long winded EXEC commands in BASIC. Buttons were handy. I could see where everything was and just start

The BOOT Program

```
100 REMark everything loaded from "device$"
110 device$ = 'FLP1_'
120 :
130 MODE 4
140 TK2_EXT : REMark activate Toolkit 2
150 :
160 LRESPR device$&'ptr_gen' : REMark Pointer Interface
170 LRESPR device$&'wman' : REMark Window Manager
180 LRESPR device$&'hot_rext' : REMark Hotkey system
190 LRESPR device$&'qpac2' : REMark QPAC2
200 LRESPR device$&'FileInfo2_bin' : REMark Fileinfo2
210 LRESPR device$&'qloadref_bin' : REMark QLOAD, QSAVE,
QREF etc
220 LRESPR device$&'qlib_run336mod' : REMark QLiberator
runtime
230 LRESPR device$&'qlib_ext' : REMark QLiberator extensions
240 LRESPR device$&'turbo_tk_code' : REMark Turbo Toolkit
250 :
260 ERT HOT_PICK ('b','') : REMark pick BASIC
270 ERT HOT_LOAD ('Q','flp1_Quill',p,256) : REMark ALT Q
loads Quill
280 ERT HOT_PICK ('q','Quill') : REMark ALT q picks Quill
290 ERT HOT_LOAD ('R','flp1_Archive',p,256) : REMark ALT R
loads Archive
300 ERT HOT_PICK ('r','Archive') : REMark ALT r picks
ARCHIVE
310 ERT HOT_LOAD ('A','flp1_Abacus',p,256) : REMark ALT A
loads Abacus
320 ERT HOT_LOAD ('C','CAPSQUILL_TASK',U) : REMark Caps Lock
indicator
330 ERT HOT_LOAD ('a','Abacus') : REMark ALT a picks Abacus
340 ERT HOT_WAKE ('.','Button_Pick')
350 ERT HOT_WAKE (CHR$(233),'Button_Sleep')
360 :
370 HOT_GO : REMark activate hotkeys
380 :
390 PROG_USE device$ : REMark PROG default device
400 DATA_USE device$ : REMark DATA default device
410 EX device$&'qascade';'PROGRAMS <'&device$&'QASCADE_rc'
```

programs by pressing ENTER on their buttons. What I didn't like though was how much space the buttons took on the screen and the fact they disappeared behind the program display when using most programs. With Qascade, just about everything can go in one button. It means an extra menu or two to wade through, but it's worth it, because its made life quite a lot easier in many respects.

What I don't like about Qascade is its manual. Setting it up initially was a bit of a nightmare for me (the command to set the colours for example) and it would be nice to see someone redo this particular manual.

However, someone else gave me an example of their qascade_rc file (the file which controls Qascade) and working from this I came up with mine. Nothing terribly clever in it. If there was, I doubt I'd understand it. Now I have it working, and am able to adapt it when I need to, I find it has simplified my life quite a lot.

Qascade appears as a button with a green border on my screen. It has the title PROGRAMS as the name of the button. It was tempting to call it START like my friend's Windows 95 START button which does pretty much the same sort of thing, but resisted the temptation.

I use Qed (a PD text editor from Holland) to edit the qascade_rc control file. It's fairly easy to use, quite adequate for my needs. I didn't like the fact that qascade needs TAB characters between everything, it's hard to make sure editors insert actual TABs rather than a column of spaces, then I found out that Qascade would accept semi-colons instead of TABs, this makes life a lot easier.

I haven't yet found a way of protecting memory from Quill, Archive, etc within Qascade, so I have retained 3 hotkeys to load these programs and allow them 256k of memory each when they start - these are the ALT A, ALT Q and ALT R HOT_LOAD definitions. I follow a previously published convention that upper case hotkey definitions load programs, while lower case ones pick those programs. A facility in Qascade corresponding to the P (Protect?) *[no, Pasion - Editor]* option in hotkey definitions would be a useful addition and enable me to do without hotkeys. The only other hotkey I use is ALT b to jump to BASIC when I need it.

There are 2 hotkeys I would not do without though. One (ALT dot) ensures the button frame is visible, and the other puts programs temporarily to sleep as buttons. Qpac2 has a "thing" (I think it's one of those Thing things anyway) called Button Sleep which can make most programs into a button - it's useful as it enables me to clear the screen momentarily without shutting down the program, then start something else to do a little job, then go back into the first program by pressing ENTER on its button. The CHR\$(233) hotkey definition simulates pressing ALT CTRL F1 to use button sleep. I noticed that Qpac2 and other

The file Qascade_rc:

```
# specify colours  
COLS;gwrqybwrb
```

```
AUTOKEY  
TITLE;Editors  
TITLE;Files  
TITLE;Graphics  
TITLE;MyPrograms  
TITLE;Programming  
TITLE;Qpac1  
TITLE;Things
```

```
MENU;Editors  
HKEY;Caps Lock for Quill;C  
SBAS;Labeller;LABELLER_bas  
EXEC;Qed;Qed  
EXEC;Typer;Typer  
EXEC;Viewer;VIEWER_RTM  
MEND
```

```
MENU;Files  
ETHG;Files FLP1_;Files;\DFLP1_  
ETHG;Files RAM1_;Files;\DRAM1_  
ETHG;Files RAM2_;Files;\DRAM2_  
ETHG;Files MDV1_;Files;\DMDV1_  
ETHG;Files MDV2_;Files;\DMDV2_  
EXEC;Archivers Control Panel;ACP_OBJ  
EXEC;Discover;Discover  
EXEC;QFormat;QFormat_exe  
EXEC;Textidy;Textidy  
MEND
```

```
MENU;Graphics  
EXEC;Graphics Editor;Graphics_task  
EXEC;Convert PCX;PCX_obj  
EXEC;Graphics Viewer;GV_obj  
MEND
```

```
MENU;MyPrograms  
EXEC;Anagrams;ANAGRAMS_TASK  
EXEC;Codes;CHARCODES_TASK  
EXEC;Colours;COLOURS_TASK  
EXEC;Graphics Editor;GRAPHICS_TASK  
EXEC;Labelling;LABELLER_TASK  
EXEC;Sorting;SORT_TASK  
EXEC;To-Do-List;TODO_TASK  
MEND
```

```
MENU;Programming  
EXEC;Config;Config  
EXEC;Dataspace;DATASPACE_task  
EXEC;MenuConfig;MenuConfig  
EXEC;Procman;Procman_PTR_obj  
EXEC;QED;QED  
MEND
```

```
MENU;Qpac1  
EXEC;Alarm;Alarm  
EXEC;Calendar;Calendar  
EXEC;Calculator;Calculator  
EXEC;Clock;Clock  
EXEC;Sysmon;Sysmon  
EXEC;Typewriter;Typer
```

```
MENU;Things  
ETHG;Exec;Exec  
ETHG;Channels;Channels  
ETHG;Files;Files  
ETHG;Hotkeys;Hotkeys  
ETHG;Jobs;Jobs  
ETHG;Pick;Pick  
ETHG;Rjob;Rjob  
ETHG;Sysdef;Sysdef  
ETHG;Things;Things  
ETHG;Wake;Wake  
MEND
```

programs use CTRL F1 for their "ZZzz" functions, so ALT CTRL F1 seemed a good and memorable key combination to do this.

I make a lot of use of Qpac2's Files menu to backup disks to ramdisk, then back to a blank floppy - I only have a single floppy drive on my system, so that's the only way to copy disks without going via micro-drive cartridges, but the disks hold 7 times as much as the cartridges so this isn't really viable. Anyway a 2MB Gold Card QL has enough free memory to hold the content of an entire DD disk in memory. This is why my qascade_rc file contains separate entries for each device for a Files menu - I can

start the Files menu with any device by clicking on the relevant entry in the Files part of the qascade menu.

I have started using FileInfo2 to allow me to start regularly used text and database files without having to go through the process of starting a program then loading the file. I have several doc files with standard letters for my customers, so by starting the files menu to find the right file, then pressing ENTER (I don't yet have a mouse though I would increasingly like to get one, I'm sure driving qascade and qpac2 would be easier with a mouse than with cursor keys) it starts Quill then types in the keypresses needed to drive Quill's menus - F3

for Commands menu, L for Load, the filename and finally ENTER - to make quill load that file "automatically". How it works is that the Execute command in Qpac 2's Files menu is taught that .DOC files belong to Quill, for example, so essentially FileInfo lets Qpac2 execute files which aren't normally executable by starting the program with which the files are normally associated. I got the idea from a PC owning friend who achieves the same thing from his equivalent of the files menu by double clicking on a file to start the program associated with that file. Asking around, I was told there was a program called FileInfo2 which could do pretty much the same

Professional & Graphical Software

ProWesS

ProWesS is a new user environment for the QL. ProWesS is short for "PROGS Window Manager", but it is much more than that. Apart from a new window manager, it contains all the system extensions from PROGS, and is essential if you want to run programs which need these extensions.

The ProWesS reader is a major part of the package. It is a hypertext document browser. This means that text files which include formatting commands (including pictures) and possibly links to other files can be displayed and read in this program. This is used in ProWesS to read (and possibly print) the manuals, and display the help files. The hypertext documents which are used by the ProWesS reader are in HTML format, the format which is popular on Internet to display World Wide Web pages.

Another important aspect of ProWesS is the possibility to allow programs to automatically install themselves on your system, and to be able to run them without resetting the system. This means that, when you get a new program, all you have to do is insert the disk and indicate "start the program in flp1", a menu option in the "utilities" button. To install a program, you indicate "install software", and the software can be added to your system. This way, you don't need to know how to write a boot file to use the multi-tasking capabilities of your computer.

ProWesS includes many programming libraries. These include syslib, an interface to the operating system, PROforma, a vector graphics system, allowing rendering both on screen and on paper (via a printer driver). The DATAdesign engine is also part of ProWesS. It is a relational database system with a bonus, as you don't even need a key field. You get a powerful record at a time data manipulation extension to the language you already use. Of course it also includes ProWesS itself, the new resolution independent window manager.

PfList

Easy to use program to create listings on any printer (especially inkjet and laser). This ProWesS application allows you to indicate the files which have to be printed. Each column contains a footer which can include the filename and filedate. The listings always allow perforation. PfList can create your listings in two columns and in landscape (or both).

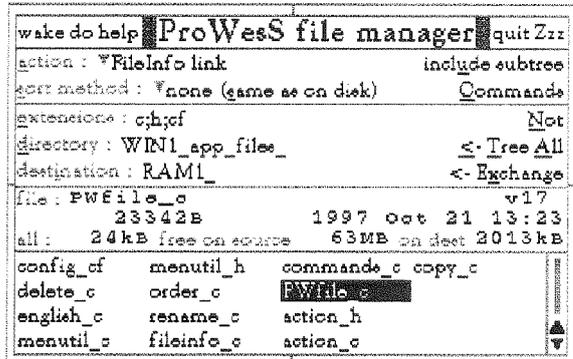
fsearch

File search utility with many useful options, like the choice to search only files with a certain extension, and whether or not the directory tree has to be scanned. All occurrences of the searchstring will be displayed with line number or offset. You can also use special matching features, like case dependent, matching a space with a stretch of whitespace, and searching for a word delimited string.

font- utils

manage your font collection. You can preview fonts on screen, see what characters exist in a font and convert Adobe Type 1 and similar fonts for use in ProWesS.

*New ProWesS application
a powerful and very user
friendly file manager*



LINEdesign

Create artistic drawings, technical drawings, process bitmaps (even scale and rotate them!), and any kind of vector drawings. You can use graphics objects to create the most fabulous drawings ever seen. Because LINEdesign is a vector drawing program, any part of the picture can be moved, scaled, rotated, slanted without any loss of precision or resolution. In LINEdesign, pictures are device independant, meaning that the printout will be the same on any printer (e.g. same size and position).

LINEdesign is good at handling text. You can easily put titles and full paragraphs on the page. All the fonts can be displayed at any size, rotation, etc. All the fonts which are available to ProWesS can be used in LINEdesign.

LINEdesign is a drawing program, but it can also be used by people who are not good at drawing. LINEdesign is a great program for making leaflets, posters, and any kind of printed work. Lots of clipart and extra fonts are available from public domain libraries and BBS's. You can even import Adobe Illustrator files.

DATAdesign

Never before has it been so easy to create, fill in and maintain your personal databases. To start a new file, just type the names of the fields. To add or delete a field, no problem, just do it. To change the name of a field, just indicate it. You can choose which fields are displayed and also which records. You can have a hidden comment for each record, look at the file in tabulated form and transfer data to the scrap or hotkey buffer. Files can be memory based (for speed) or disk based (for safety).

new address !!

Dr. Fr. Hemerijckxlaan 13 /1
2650 Edegem
Belgium

tel : +32 (0)3/ 457 84 88
fax : +32 (0)3/ 458 62 07
email : joachim@club.innet.be
www : http://www.club.innet.be/~year2827

ProWesS - BEF 2400

DATAdesign - BEF 1200

PWfile - BEF 900

PfList - BEF 600

Payment terms :

LINEdesign - BEF 1200

fontutils - BEF 1200

fsearch - BEF 600

You have to run ProWesS to make LINEdesign, DATAdesign, fsearch, fontutils and PfList work (even though DATAdesign uses wman).

All our software is normally supplied on high density (HD) disks. However they can be obtained on double density (DD) disks at an extra costs of BEF 100. To use ProWesS and any of our other packages, you need a system with at least 2MB of memory. You should have a harddisk although a two disk system will also work. The use of SMSQ/E is strongly recommended for optimal use of ProWesS.

If you are VAT registered (specify registration number) or live outside the EEC, the amount to be paid is the total (including postage) divided by 1.21 (no need to pay too much).

Payment can be done by EuroCheque in BEF, or by VISA, EuroCard or MasterCard. Credit card orders can be handled by phone. For credit card, please specify name of card owner, card number and expiry date.

Postage : Costs of postage and packaging have to be added. You can choose the quality. Rate depends on no of programs.

copies	priority mail			ordinary mail		
	Belgium	Europe	World	Belgium	Europe	World
one	100	200	240	100	120	145
two	135	340	420	135	190	230
3 or 4	160	560	770	160	310	395
5 to 8	185	870	1250	185	550	705
more	295	1130	1610	295	800	1030

All prices are in BEF, including 21% VAT

thing for the QL. It took me a while to master it (I tend to use my age as an excuse for being slow with new software). It ought to be possible to get Qascade to call files like this using the FileInfo method, though I haven't yet worked out how to do this.

I use Archivers Control Panel to zip and unzip files, but there's a lot I don't know about this program which I'm sure I'm missing out on - for example, apart from ZIP what are the other compression programs it refers to?

I have never really used HOT_RES and those hotkey commands as I don't understand why some Turbo compiled programs don't work - I think it has something to do with the code modifying itself when it runs in some way. Since most of my programs are self-written and compiled in Turbo, I've avoided the use of HOT_RES and those commands.

I don't use subdirectories with my floppy disks partly because I only recently began to understand them now I have a Gold Card, but also I don't think it's worth it with just a single DD drive.

My KISS philosophy extends to the programs I use too. For all their faults, Quill, Archive and Abacus do what I need of them - writing letters, keeping lists - in fact they're probably my most used programs. At some point I may try to learn to use Exchange if it will run on my system, but for now I'm happy with good old Quill and co. I use a few PD programs such as Dilwyn Jones's text file viewer and a program called PROC-MAN which is a programming

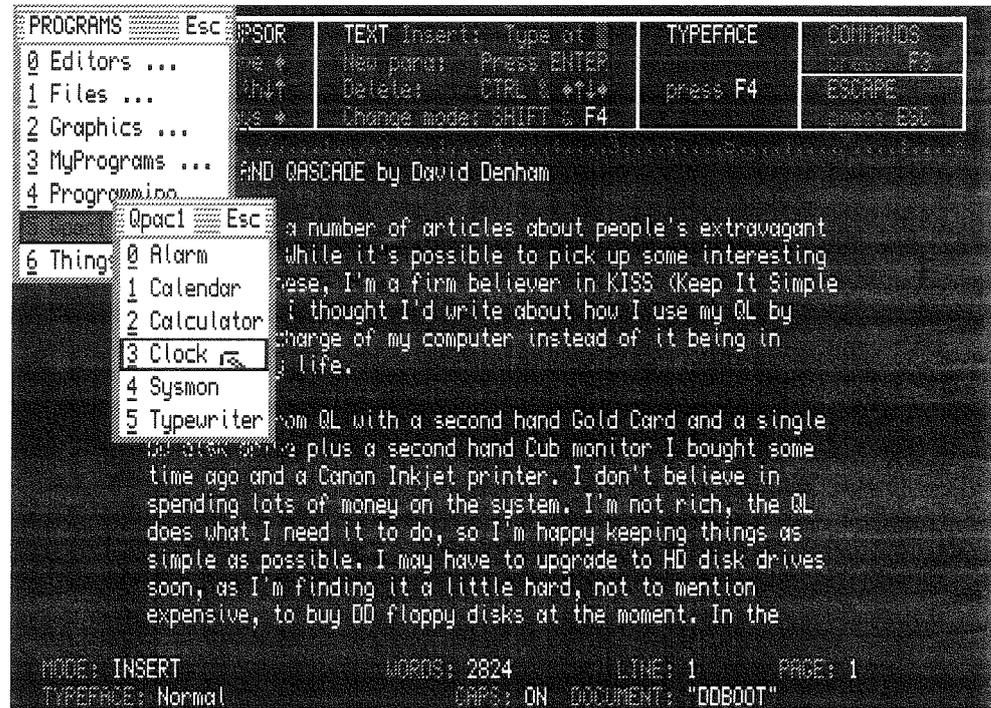
utility I use a lot to extract procedures from my programs to transplant into other programs. It's a bit slow with long BASIC programs, but does what I need quite admirably.

On the whole, I write my own software and compile them with Turbo. I'm not proud of my programming skills and probably wouldn't want to show my code to anyone else, but at least as I'm only inflicting them on myself (bugs and all) it's probably OK.

FileInfo has a little picture viewer which is quite useful

The MyPrograms menu in my Qascade menu has a few other programs in it really, but I cut it down somewhat to keep the length down for publication. If Dilwyn has space, perhaps he'll print the BOOT file and the qascade_rc file in the hope they may prove handy to someone.

The qascade_rc file is a plain text file, it can be built using any text editor. The first thing in mine is the hideously complex colour command - here it's set to green border around a white paper with a black title, items



just press ENTER on the file-name of the graphics file and if it's a type known to the viewer, it displays it. I wrote my own very simple graphics program which I keep updating from time to time in order to make cards etc for my business and generally to amuse myself. I found it useful to get a copy of a program called Convert-PCX from DJC years ago. This converts some PC graphics files into screens for the QL, which I can then load into my program for some simple colouring or touching up.

selected become red and so on.

It's split into 7 sub-menus containing most of the programs I use. I have yet to add some programs, that will be a future time passer for me I guess.

The first menu contains items to start various text handling utilities I use, such as Qed editor, a Quill CAPS LOCK indicator program, and a few others. The CAPS LOCK indicator program is a small Turbo compiled program which simply monitors the state of the CAPS LOCK button and print CAPS

ON or CAPS OFF as appropriate when it changes. Unfortunately, it's positioned to appear on the bottom line of the Quill display, so pointer environment means it'd normally be buried under quill and unable to display its output. Qascade includes no facility (as far as I know) to allow the little program to run 'unlocked' so I cheated and put it on a HOT_LOAD hotkey with the 'U' option parameter to let the program run unlocked on top of another program, and used the HKEY command to execute that hotkey definition (a bit like a HOT_DO command in BASIC) to start it unlocked so it can write over the bottom line of the Quill display.

The second menu contains a FILES menu call for each of the devices on my QL system - FLP1_, RAM1_, RAM2_, MDV1_ and MDV2_. I rarely use micro-

drives nowadays unless I need to go back to an old business or text file still on microdrive cartridge, for example. These files menus are called as THINGS using the ETHG command of Qascade (I don't pretend to understand this part, but it works).

Discover and Textidy let me share text files with a PC owning friend. QFormat is a little program for quickly reformatting used floppy disks. All these are simply started using EXEC in the normal way.

The next 3 menus just contain normal programs to be EXECuted.

The next menu contains the QPAC1 applications. I use the calendar and calculator constantly, so these are on my working floppy ready to be called up on demand. It is tempting to load them at bootup since they are fairly short programs, or to try to work out

how to HOT_RES them, but it seems to work quite well for me done like this.

The final menu calls up the 'things' from Qpac2. I think it would be OK just to have a single call for the EXEC menu here and select the menu I want from that, but this is more versatile for me to be able to directly call whichever Qpac2 menu I want. As I don't use these very often, it's handy having them in a single menu like this to prevent me having to go to look up in their manual how to call these menus when I want them!

To add your own programs to these menus, all you'd have to do is add extra EXEC lines to one of the menus, between the MENU and MEND statements. The format is quite easy, it consists of (1) the EXEC statement, (2) a name which appears in the menu and (3) the filename of the program.

QBOX-USA BBS



Operating since 1993 on a Sinclair QL from Utica, Michigan, USA

Supporting ALL Sinclair and Timex users

Message and File Areas for QL, Z88, Spectrum, T52068, ZX81, T51000

Modem speeds 300 bps to 33.6k bps supported

24 hour operation - call anytime

810-254-9878

The AUTOKEY command near the beginning automatically assigns keypresses to items in the menus. This is very useful for people like me without a mouse - it is quicker to press a single key than to steer the mouse to an item and pressing ENTER.

Back to the BOOT program itself. This starts by setting MODE 4 in case I start the machine in MODE 8 by pressing F2. Then it issues a TK2_EXT statement to enable Toolkit 2 on the Gold Card. The first 4 LRESPR lines install the pointer environment files and Qpac2 itself. Then I install FileInfo2, and some compiler files. QLOADREF is a Liberation Software utility with QLOAD and QSAVE commands for fast loading and saving of BASIC programs, and a utility called

QREF which is a programming aid - it lets me have a list of variables and procedure names I've included in a program. QLIB_RUN336MOD is a modified version of the QLIB_RUN file included with some Qliberator compiled programs, apparently this version fixes a minor bug in QLIB_RUN to allow it to be used with the Archivers Control Panel. QLIB_EXT contains some extensions to enable cursors and a few other things to do with the Qliberator compiler (which I don't own). Finally, this section installs the Turbo Toolkit, which I use a lot in my own programs. The first hotkey definition is one to let me pick BASIC at any time - the cursor jumps into the #0 window. I can jump out of a program into BASIC to do something then go back into

that program without having to quit first, this is probably the single best reason for using pointer environment on the QL I think, it makes little things like this so easy to do.

The next few lines set up hotkeys to load the Psion programs supplied with the QL. They use the 'P' option to protect about 256k of memory for each program. Pressing SHIFT ALT Q loads Quill with 256k of memory to itself, SHIFT ALT R does the same for Archive, and SHIFT ALT A for Abacus. Pressing ALT and the lower case keys makes the QL jump into those programs if they are already running.

Shift Alt C is defined to start the Caps Lock indicator mentioned above. When used with Quill or any other program it has to be 'unlocked' so that it doesn't stop running when you are typing in Quill, for example. So I used the 'U' option in the HOT_LOAD command to unlock its windows. It can either be started with SHIFT ALT C or from the Qascade menu described above.

The HOT_WAKE !! line makes it possible for me to see the Qascade button at any time by pressing ALT .

The pointer jumps up to the Qascade button and I have to press ENTER to show its menu. From there I move the pointer to the name of the sub-menu required, press ENTER and select which program I want to use.

The HOT_WAKE CHR\$(233) statement enables me to reduce any running program temporarily into a button out of the way by pressing ALT CTRL F1 - it works by calling the button_sleep thing from Qpac2.

The HOT_GO command enables the hotkeys. Without this command none of them would work. Equally, while hotkeys are enabled, LRESPR wouldn't

RWAP SOFTWARE

Q-HELP

v1.03

- Easy to Use
- Syntax for over 600 QL keywords
- How to use keywords
- Can use with Q-Index and QD
- Automatic Cross-Referencing
- Create your own Help Files

Order from: RWAP Software, 26 Ashenurst Road
Russells Hall, Dudley, West Midlands DY1 2HH
TEL: 01384-350043 Cost: £10
Cheques in £ sterling payable to 'R.Mellor'

work, I'd keep getting 'Not Complete' errors, so it's important to keep HOT_GO until after you've finished all your LRESPRs.

The next two lines set the DATA_USE and PROG_USE defaults to FLP1_. You may have

noticed a 'device\$=FLP1_' command at the start of the program. If I ever upgrade to hard disks, this should help me move the boot program to WIN1_ without too many changes, although I haven't yet converted all the hotkey definitions

- some of the still have explicit FLP1_ names in there.

Finally, the last line starts Qascade itself, with the button name PROGRAMS (or whatever name you care to enter here!).

Gee Graphics! (on the QL?) - part 11

Herb Schaaf

"Persian" Recursions

Rekurs = goes back or comes back.

As I write this I'm just back from the East Coast QL show. Simon Goodwin was there and what a delight! So many ideas put into my head, it will take me more time than I have to try them all out. Simon demonstrated MIDI via the QL network and also was showing many especially attractive graphics programs by Mark J Swift, Dave Halls Barker, Robert James Nash, Mark Handley, and others. If you

know these people, thank them for me and see if you can get them to write computer graphics articles for QL Today. One impressive program shows a human head in 3d motion as done on the QL in 1993(?).

Another impressive performance was presented by Simon's friend Chris. Her platform was McKelvy's patio and the program included feminine frame animation sequences with rotations, translations, and zooms accompanied by the

swish and jingle of small coins about her hips in synchrony with mid-eastern music. Speaking of mid-eastern, that reminds me of Persia and so brings us back (recurse) to the topic of this article, "Persian" recursions.

This time (GG#11) we will stray off-topic in several ways:

1 - we try to force our way through a recursion algorithm.

2 - we convert a program (more or less) from QBASIC to S*BASIC.

3 - we can't foresee the results, but hope they will please.

I hope you'll experiment, enjoy, and share.

I'll keep the S*BASIC listing brief and put REMarks in the text.

```
100 REMark PersianRecursion_bas
110 REMark HL Schaaf June 15, 1999 for GG# 11
120 REMark Reference: "Persian" recursion by Anne M Burns
130 REMark Mathematics Magazine V.70 N.3 June 1997, p196-199
140 WINDOW 512,256,0,0 : MODE 8
150 PAPER 0:INK 7:CLS
160 color_range = 16
170 w = 256 : h = w
180 mesh = 1
190 m = 2`mesh
200 size = 0
210 s = 2`size
220 init_bc = 2
230 c = init_bc
240 l=0 : r=w : b=0 : t=h
250 DIM attrib(w,h)
260 level = 0
270 positions = 6
280 stack_depth = (LN(w/(s))/LN(2))-mesh+1
290 IF stack_depth<1 : stack_depth =1
300 DIM stack(positions,stack_depth)
310 FOR i = 0 TO w STEP s
320   FOR j = 0,h
330     attrib(i,j)=c
340     attrib(j,i)=c
350   END FOR j
360 END FOR i
```



```

370 :
380 FOR i = 0 TO 2*(w-s) STEP s
390   FOR j = 0, h-INT((s/2)+.5)
400     BLOCK 2*s,INT((s/2)+.5),(2*i) MOD (2*w),j MOD h,c
410     BLOCK s,2*s,2*j MOD (2*w),(2*i) MOD w,c
420   END FOR j
430 END FOR i
440 :
450 Cg l,r,t,b
460 :
470 PAUSE
480 STOP
490 :
500 :
510 DEFine PROCedure Cg(l,r,t,b)
520 stack(0,level)=stack(0,level)+1
530 stack(1,level)=l
540 stack(2,level)=r
550 stack(3,level)=t
560 stack(4,level)=b
570 IF (r-l) < s * m : RETURN
580 :
590 f = 0
600 f = f + attrib(l,b)
610 f = f + attrib(l,t)
620 f = f + attrib(r,b)
630 f = f + attrib(r,t)
640 f = init_bc +INT(f/4) + 3
650 f = f MOD (color_range+1)
660 c = 1 + f
670 :
680 mc = (l+r)/2 : mr = (t+b)/2
690 stack(5,level) = mc : stack(6,level) = mr
700 level = level + 1
710 FOR i = l+s TO r-s STEP s
720   attrib(i,mr) = c : BLOCK s*2,s,((2*i)-s) MOD (2*w),mr-(s/2),c
730 END FOR i
740 FOR i = b+s TO t-s STEP s
750   attrib(mc,i) = c : BLOCK s*2,s,((2*mc)-s) MOD (2*w),i-(s/2),c
760 END FOR i
770 Cg stack(1,level-1),stack(5,level-1),stack(6,level-1),stack(4,level-1)
780 Cg stack(5,level-1),stack(2,level-1),stack(6,level-1),stack(4,level-1)
790 Cg stack(1,level-1),stack(5,level-1),stack(3,level-1),stack(6,level-1)
800 Cg stack(5,level-1),stack(2,level-1),stack(3,level-1),stack(6,level-1)
810 level = level -1
820 l = stack(1,level)
830 r = stack(2,level)
840 t = stack(3,level)
850 b = stack(4,level)
860 END DEFine Cg
870 REMark end of listing for PersianRecursion_bas

```

If the editor will include the QBASIC version of the program in spite of his emotional dislike of the platform that it runs on you can see the algorithm I was working from to make a S*BASIC version. I think many of you can easily convert from one platform to the other, and

I'm sure you can simplify and improve my hack. Your comments and suggestions are welcome. I was not able to use a simple recursion as in the original program, but felt that the QL was surely able to do it; I just didn't know how! Perhaps a clever use of the 'LOCAL' keyword in a PROCEDURE or

FUNCTION would do it. I ended up using brute force to create a stack deep enough to hold the values for 6 positions at each level. Can anyone do it on the QL where the QL keeps track internally? "POINT" in QBASIC is different from our QL "POINT"; the QBASIC "POINT" returns the attribute

(ink color) of a pixel on the screen; for the QL we could have use the PIXEL% from the DIY toolkit by Goodwin. I faked this by setting up an array "attrib" to hold the attribute. I

used the QL BLOCK function instead of LINE and made use of the 2:1 graphics aspect combined with the 4:3 monitor aspect to make a rectangular rug that filled the QL screen

instead of the square rug of the PC. Integer variables could have been used; I think that ! in QBASIC is like the % in S*BASIC.

```
"Persian" Recursion  by Anne M. Burns
  from Mathematics Magazine v.70 n.3 June 1997 p.196-199
  Reprinted with the kind permission of Anne Burns.
```

```
DECLARE FUNCTION ColorGrid! (left!, right!, top!, bottom!)
DECLARE FUNCTION f! (left!, right!, top!, bottom!)
INPUT "Enter the border color ( 1 to 15 ) ", bordercolor
SCREEN 12
CLS
left = 0
right = 256
top = 0
bottom = 256
LINE (left, top)-(right, top), bordercolor
LINE (left, bottom)-(right, bottom), bordercolor
LINE (left, top)-(left, bottom), bordercolor
LINE (right, top)-(right, bottom), bordercolor
k = ColorGrid(left, right, top, bottom)
END

FUNCTION ColorGrid (left, right, top, bottom)
IF left < right - 1 THEN
  c = f(left, right, top, bottom)
  middlecol = (left + right) / 2
  middlerow = (top + bottom) / 2
  LINE (left + 1, middlerow)-(right - 1, middlerow), c
  LINE (middlecol, top + 1)-(middlecol, bottom - 1), c
  ColorGrid = ColorGrid(left, middlecol, top, middlerow)
  ColorGrid = ColorGrid(middlecol, right, top, middlerow)
  ColorGrid = ColorGrid(left, middlecol, middlerow, bottom)
  ColorGrid = ColorGrid(middlecol, right, middlerow, bottom)
END IF
END FUNCTION

FUNCTION f (left, right, top, bottom)
p = POINT(left, top) + POINT(right, top) + POINT(left, bottom)
  + POINT(right, bottom)
f = (p / 4 + 3) MOD 16
END FUNCTION
```

You'll see that the next color is based on input from existing corner pixels, influenced by coefficients, factors, functions, etc. As it exists the symmetric result can resemble the designs seen in oriental rugs, hence the term "Persian" Recursion. It doesn't have to be symmetric; by giving more influence to two adjacent corners the design will begin to look more like a prayer rug. Certain

small parts of the design may resemble tartan, plaid, campaign ribbons and other kinds of textiles. There are so many variables you can fiddle with, and you have no idea as to what the result will be until it is done! If you discover what it takes to create a Sarouk, or Kashan, or Heriz, or Bukhara, etc. 'on purpose', can you share the details with us? If you feel good about some com-

bination you have found especially attractive please let us know how you did it.

Here are a few of the many variables that can be worked with: 'size' as exponent for s (s as integral powers of 2); range is 0 to (8 mesh). size 0 is the finest resolution, size 1 is 'blockier' but faster, size 3 begins to look more like a hooked rug, size 4 is very fast and very blocky.

'mesh' as exponent for m (m as integral powers of 2); range is 1 to (8 size). mesh 1 makes for a 'plush' carpet. mesh 2 is faster, the warp and woof show like coarse needlepoint on mesh canvas. mesh 3 is threadbare, and mesh 4+ is bare threads.

In the "f =" sequences you can use math functions of all sorts, and fudge factors to change the way the design turns out. You may use individual coefficients and/or math operators and/or functions for each of the corners, subsets of corners, and/or the entire collection of corners. The additive term such as the 3 in the original list can be changed, negative numbers can be used, etc. Then too, think of the ways you could (mis)place parentheses, affecting the ways in which your expressions would be evaluated!

The "colorange" can be changed; for the QL we can go as high as 255.

You could in effect "pick your yarns" by putting selected inks into an array, creating a palette having only those colors wanted, and perhaps having some influence over the desired proportions of each color.

The initial bordercolor is set with "init_bc"; as written it is red, changing it also changes the design! The range is 0(black) to colorange. We can also try changing the QL to MODE 4.

We can change the overall size by setting "w =" to another number, preferably (but not necessarily) a power of 2. The QL can go up to 256, while Aurora should be able to handle 512(?). If you have an Aurora, please try it and let us know how it works.

Eventually we want to come back to an ink color, and for the QL that means an integer in the range 0 to 255.

There are so many ways to twiddle and play around with this kind of program. Repeated use of the RECOL command e.g.

```
RECOL 1,2,3,4,5,6,7,0
for instance, or
```

```
RECOL 1,3,5,7,0,2,4,6
will quickly bring up a series of 'new' arrangements. While the patterns remain the same the effect of changing colors brings out a variety of 'new' designs. All permutations of 8 colors taken 8 at a time would involve over 40,000 variations! Another fun thing is to loop through the variables of mesh and size and watch the effect. Try
```

```
"FOR mesh = (8-size)
TO 1 STEP -1"
```

or

```
"FOR size = (8-mesh)
TO 0 STEP -1"
with the appropriate placement and END FOR statements and watch the successive developments.
```

In her original article Anne Burns suggested using borders with more than one color, such as from dark to light; she also suggested trying quadratic, cubic and trigonometric functions as just a few examples of ways to achieve variety. For "ambitious" students she challenged them to take the idea used here with rectangles and then extend it to triangles and hexagons.

References cited by Anne Burns in her article were:
1 - A.K. Dewdney's "The Armchair Universe", WH.Freeman & Co., New York, NY, 1988
2 - "Cellular Automata Machines" by T. Toffoli and N. Margolus. The MIT Press, Cambridge, MA, 1987

Now back to the East Coast Show. (that's recursion for you!) Just before getting my own skit together for the show, I received a beta test version of a "Portable Screen Toolkit" from Mark Knight that lets you do some neat graphics; animations, clip, paste, and more. Folks at the show saw the chaotic Lorenz 'butterfly' flutter by in stereo; that was done using just a few of the functions from Mark's toolkit. I hope to have a review article ready for the next issue. If not, then we will go on to shear and reflection of graphic objects in the QL.

Style Check 3 from Just Words!

written by Geoff Wicks

A review by Henry Orlowski

I was asked to review this software at the Bristol Workshop in Clevedon in April 1999.

Geoff Wicks, the author, also of QL Thesaurus and Solvit fame, attended the workshop and was able to give a full demonstration of its

capabilities to a live audience.

I was aware that Geoff was achieving a very high level of interest in the software, and was therefore very pleased to be given the opportunity to review it. So here goes....

1. What you get

You get a single DD disk and one A4 manual of about 20 sides, half of which represent a detailed alphabetical glossary of usage, correct or incorrect.

On first glance the manual gives the impression of being logically laid out and comprehensive. It's not bulky but it is detailed, with clear paragraphing and headings, along with pictorial representations designed to assist the user.

2. What does it do?

Style Check 3 (SC3) is a style checker, it says. There appear to be programs out there referred to as style checkers, but what does that

mean? And is style checker the right terminology (in the absence of another) and does it accurately reflect the author's intentions and the software's capabilities?

After all, "style" is a subjective feeling, not a computerised, digital, logical process, isn't it? It's something that a Byron, a Shakespeare or a Voltaire have, not what a Henry Orłowski can achieve with a computer program, I think.

So the ultimate question in "style" may be whether 'I wandered lonely as a cloud' or 'I wandered by myself through the lounge of the hotel looking for a program to review' has 'style', or any style or no style at all. SC3 might warn me about my sentence length and that I've used the word "the" twice, but the style of either may be appropriate to the circumstances in which they were written.

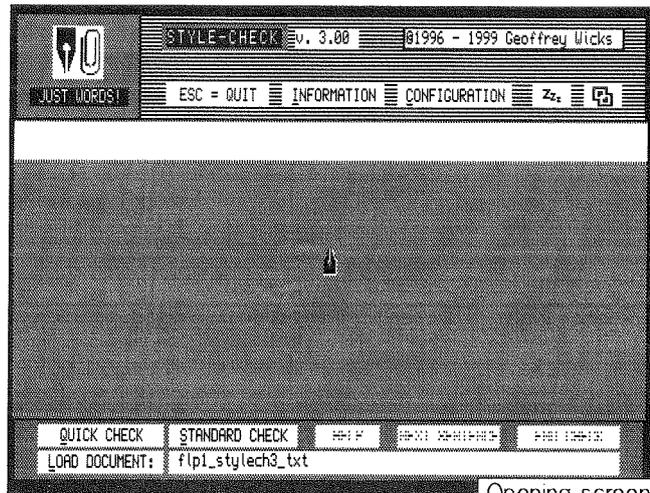
SC3 will tell you if your proposed children's story may be only intelligible to university graduates, will warn you if there's a problem with your grammar, will warn if you're possibly using the wrong word, or will suggest a better or simpler word to use. For example it will highlight your use of less (is 'fewer' better?), any instances of using a word

too often, or even if you've used a double negative, and many others.

In conclusion, it's not really style that we're talking about, but correct usage, grammatical usage, following rules or not. It's based on

objective rather than subjective data.

Nothing wrong with that though. Style may remain at least for some time one of the aspects of humanity that still distinguishes us from our digital assistants.

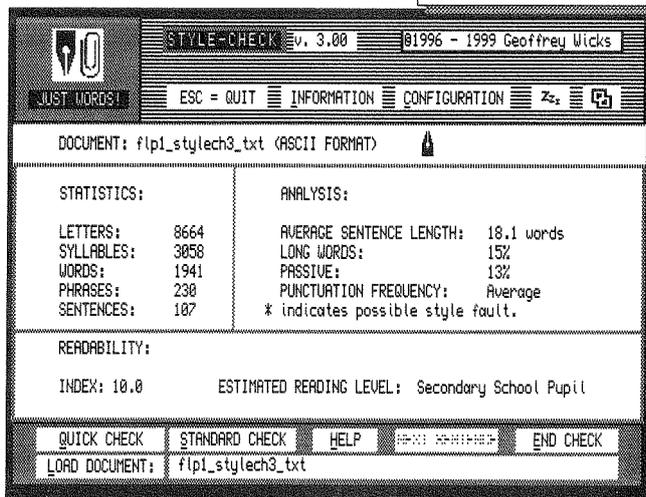


Opening screen with document loaded.

3. What you need

- a QL or QDOS/SMSQ compatible computer with at least 512K RAM, Toolkit 2 and the Pointer Environment.
- Optional mouse and harddisk operation
- Pre-prepared documents which must be in a choice of Quill, Perfection, Text 87 or Ascii format, in other words formats generally available to all QL'ers.

Quick check screen for review document.



4. The Manual

It's always important to take a look at the manual as part of a review.

As a rule of thumb, always read the manual first, at least quickly to get a "feel" for the program and to help guide you if things don't quite happen as expected.

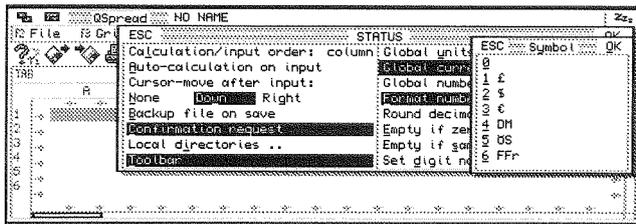
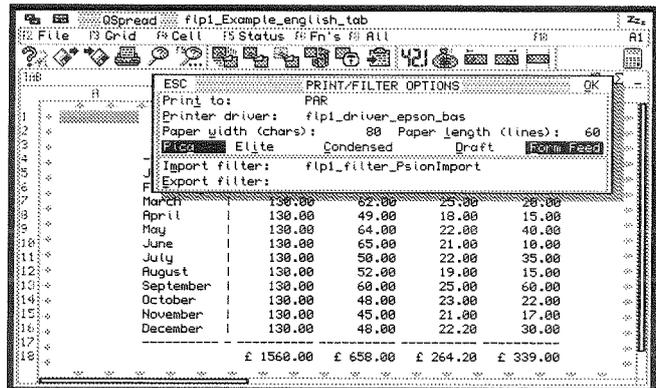
In many cases you can't actually go through a manual unless you've got the program up and running in front of you at the same time. This one is different though. I

found it served as a good acquaintance and familiarisation read on its own, before running the program. Not necessarily to find out which buttons to press, but more to learn what the program is all about, how it works, and what you can (or can't) expect it to do.

Jochen Merz Software

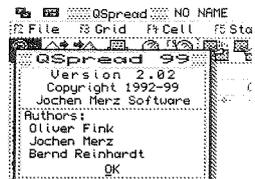
QSpread99

It is done! A new major release of QSpread is ready!
 We have added many features:
 QD-style toolbar with many additional functions.
 QD-style menus, shortcuts and keystrokes.
 SHIFT TAB gives very long formula entry line.
 ALT TAB moves pointer outside grid - if you don't have a mouse
 ESC puts QSpread to sleep.
 QDs printer driver filters can be used for QSpread as well.
 More intelligent confirmation request settings.
 All currency symbols are configurable now, including the EURO.
 CNTNUM() just counts numerical fields in a range.
 Multiple "-" and "====" are automatically treated as text.
 Some special single characters like "|" are treated as text.
 Automatic cursor-move after edit configurable, can also be turned off.
 New DATE macro function which inserts current date.



DATE format is configurable, it can be US-format or 4-digit year.
 Default DATE separator character configurable.

In addition, lots of long-standing bugs are fixed, e.g.:
 Window can be resized after QSpread was put to sleep.
 DATE\$ shows year-2k-dates correctly.
 Double "." and other problems



in small numbers fixed. Lots of bug fixes in the formula parser done.

These are the major changes, plus various minor ones, of course. You will get a new manual, not just additional pages.

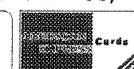
**The upgrade price is DM 39,90. Please return master QSpread disk for upgrade.
 A new QSpread99 is price-reduced to only DM 149,-**

CueShell

A quick reminder: you can get QPC together with CueShell by adding **DM 40,-** to the price of QPC. Even if you already bought QPC, you can add CueShell now if you like. Still only **DM 40,-!** Please return the original QPC master disk for an upgrade. If you do not own QPC and you like to purchase CueShell: **DM 89,-**

TERMS OF PAYMENT

Postage and package [Germany] DM 8,99 (if total value of goods is up to DM 50,- then only DM 5,99). [Europe] DM 14,50 (if total value of goods is up to DM 50,- then only DM 9,50). [Overseas] between DM 14,50 (1 item) and DM 35,- (maximum). All prices incl. 15% V.A.T. (can be deducted for orders from non-EEC-countries). E&OE. Cheques in DM, £'s, Eurocheques and Credit Cards accepted.



JOGIEN MARZ SOFTWARE

Im stillen Winkel 12 D-47169 Duisburg
Tel. 0203 502011 Fax 0203 502012
<http://www.j-m-s.com/smsq/index.htm>

QPC II exists!

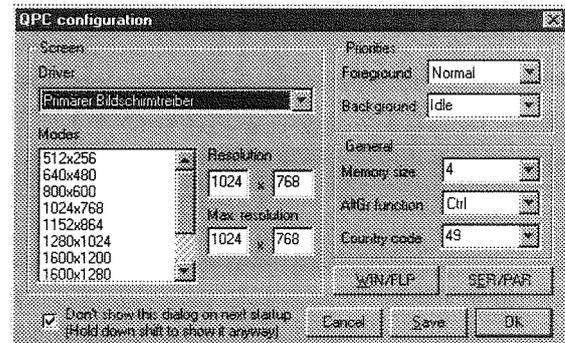
We're not giving a full list of what QPC is: to make it short: it allows you to run the majority of QL Programs on PCs, and comes with the QDOS-compatible (but much faster and better) operating system SMSQ/E.

So what's QPC II then?

The more advanced version of QPC. Whereas QPC required your PC to run in DOS mode only while QPC was running, QPC II now allows you to multitask with Windows95, 98 and NT. You do not need to run your system down and up to start QPC II, just double-click it and it starts. Also, the configuration of QPC II is MUCH easier - it is done in a configuration window where all settings can be easily done.

Installation is much easier too, all is done automatically with an installation program, or you just execute it directly from floppy disk or harddisk.

We have also reacted on the requests of many users: you can now have the QL windows scaled! For example, if you have a graphics card or a laptop with a resolution of 1024x768 pixels, then you can decide whether you want to use the full resolution (thus giving you 1024x768 pixels for the QL ... high resolution with small fonts) or if you want the 512x256 pixels to be scaled into 1024x768 (so that you have a large, nice original QL display).



So, with QPC II you get

- the advantages of QPC
- plus much easier installation
- plus much easier configuration
- plus multitasking with Windows
- plus scaleable screen resolution

AT THE SAME PRICE AS BEFORE - only DM 249,-

You can upgrade to QPC II if you already own QPC by sending in your QPC master disk.

The price is only DM 79,90.

To run QPC II, you need to have at least a 486 or Pentium, 16MB of RAM, Windows 95,98 or NT and DirectX.

TERMS OF PAYMENT

Postage and package [Germany] DM 8,99 (if total value of goods is up to DM 50,- then only DM 5,99). [Europe] DM 14,50 (if total value of goods is up to DM 50,- then only DM 9,50). [Overseas] between DM 14,50 (1 item) and DM 35,- (maximum). All prices incl. 15% V.A.T. (can be deducted for orders from non-EEC-countries). E&OE. Cheques in DM, £'s, Eurocheques and Credit Cards accepted.



It's laid out logically and allows you to enter it at different levels and stages. So it's easy to find the bit you need if you get stuck. Or it's easy to blitz through the Quick Start section if you can't wait to get your hands on the program. Or it's easy to quickly go to the Customisation section if you don't like the results you get with the current configuration.

Essentially it's difficult to fault. It told me everything I needed to know, gave me no difficulties in finding the relevant section, explained the menu structure concisely, gave numerous examples in the glossary, and covered everything.

5. What you do

The program isn't difficult to master. It's generally intuitive and clear in the presentation of options. And if you already run under the pointer environment, you will certainly have no difficulties in navigating through the program, aided by the familiar buttons and menu items. Mouse users will find the operation easiest, but non mouse users have keypress options to obviate any inherent weaknesses.

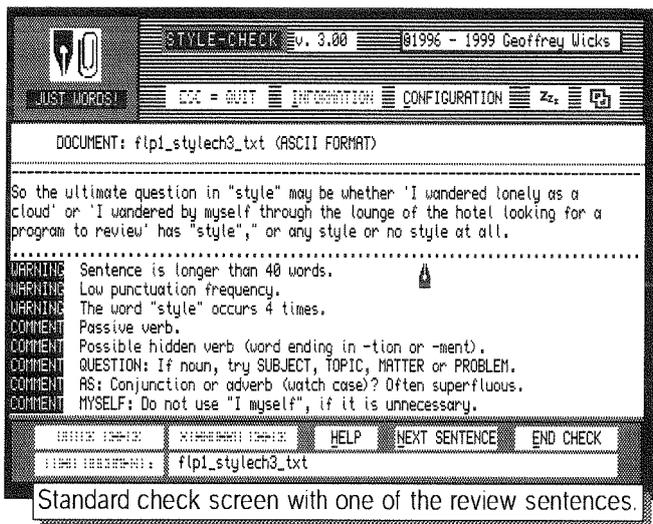
When started the program presents you with an initial opening screen which allows you to check program information, enter the configuration screen or load a document for checking. You need to load a document to get the program to carry out its action, remembering that this

document must be in one of the compatible formats.

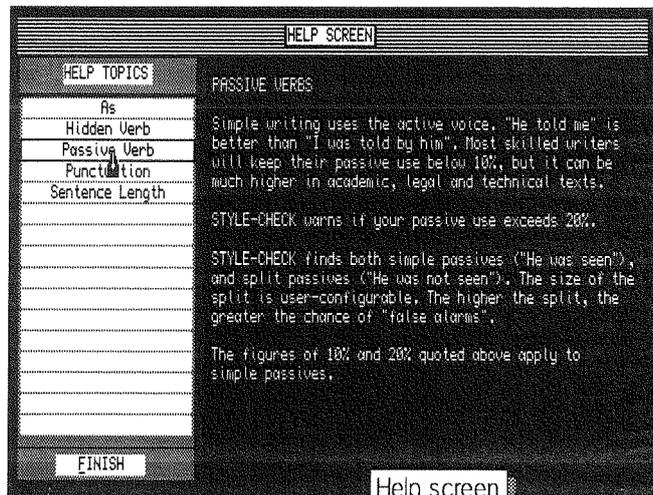
You know your document is loaded when you are presented with the options of doing either a Quick Check or a Standard Check, although the document is not actually displayed. You are not obliged to do a Quick one before a Standard one.

The Quick Check is a statistical summary of your document. It takes a few seconds to do, depending on the size of your document, and usefully provides a basic progress meter to let you know it's doing something. Once complete you get 3 lots of information:

- Statistics. Word, letter, sentence etc. counts.
- Analysis. Indications of average sentence length, percentage of long words, percentage of



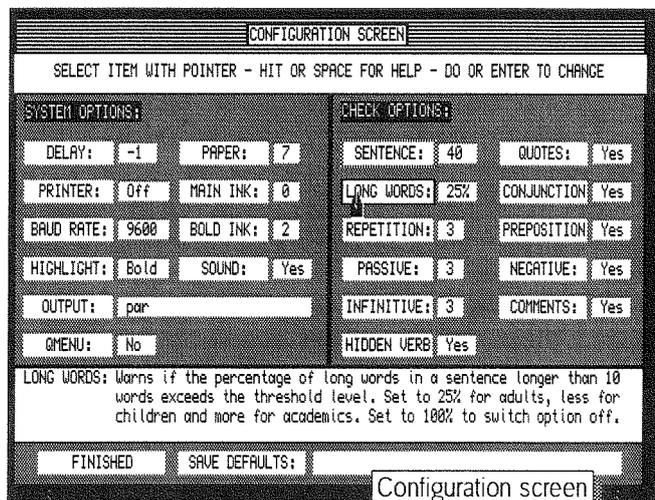
Standard check screen with one of the review sentences.



Help screen

sentences with possible passive verbs, and punctuation frequency. No idea what a passive verb is? Check in the manual, or click Help. Any areas of possible style faults are highlighted, enabling you to pay particular attention during the Standard Check.

- Readability Index. What? Well it's a sort of number derived from an equation taking into account the average sentence length and number of syllables per word. But you don't need to concern yourself with that, except to know that the range is from about 5 to about 20. Average band is 7 to 13. Below that and it's a children's text. Above that and it could be a University doctorate thesis. Anyway it'll also tell you whether the estimated reading level is for a young child, schoolkid, adult, student or graduate.



Configuration screen

The Standard Check analyses each sentence in turn and displays warnings and comments. Warnings are more serious observations, comments less so. Throughout you must remember that you remain the final arbiter of whether the comment or warning is valid, or you want to accept it. In many cases the computer is not intelligent enough to distinguish between actual faults and possible faults, but at least highlights where they might lurk. Get stuck with a particular comment and need to know more? No problem, either check in the glossary or press Help to see if it's got something on it.

The comments relate to specific words which it highlights in the actual sentence. This works reasonably well but can be a little bit equivocal when more than one comment refers to the same word or sentence. The sentence is displayed along with the comments of course, but if it is long, and there is a large number of comments, you may not see the whole sentence or even any of it at all. Disappointingly there is no option to go back or scroll it down bit by bit, so you have to restart it and try to catch it again before it disappears. Remember also that you cannot make any changes to your document whilst you are in SC3, so you have to either note all the comments down, or output to printer or file for subsequent reference and possible changes to the document.

So what does it check for? All the options that have been set in the Configuration section, or already there by default. The list includes sentence length, long words, word repetition, passive verbs, split infinitives, hidden verbs, position of conjunctions and prepositions, and double negatives. If you don't like the default values it uses then you can change them in the Configuration screen.

It will also give you comments on individual words, provided that it is configured to do so, if these words are contained within its own comprehensive database. If you're not sure if you're using words like "deem", "entail", "lie", "proscribe", "strata" or "who(m)" correctly, then this will pick it up and highlight a possible fault. And if you don't like Geoff's headmasterly "style", then you can easily edit the database, and add to it, or replace with your own.

6. Conclusion

SC3 is very good at what it states it does, but it's not perfect and you still have to make up your own minds on how useful a program like this is. It is after all a usage checker more than a 'style' checker. And as far as correct usage is

CHEAPER BUT BETTER

With the recent release of **STYLE-CHECK 3**, the upgrading of the **JUST WORDS!** program range is complete.

All programs are now available in pointer driven versions and are fully mouse and high resolution screen compatible.

They are not only better, but now also cheaper.

SINGLE PROGRAMS:

£10 OR €15

THE COMPLETE SET:

£25 OR €37

Payment by sterling cheque or by giro transfer in euros to Netherlands Postbank number 4111942 (G.T. Wicks)

Also available from QBRANCH.

*Geoff Wicks, 28 Ravensdale,
Basildon, Essex SS16 5HU,
United Kingdom. Tel: +44 (0)1268
- 281826*

concerned, nowadays people tend to be more liberal in their approach and an insistence on correct grammatical construction and presentation is not the highest priority. And can a computer give you 'style' or is it a case of 'you've either got it or you haven't'?

Nevertheless, if you are more of a traditionalist, bemoaning the fall in standards of English, then this is the program for you. Or if you need to write texts, or reports, or need to address texts to a wider audience as part of a profession, then I'm sure you will find many of the aspects of this program useful, especially the readability index and estimated reading level, to ensure that your text is well aimed at its target audience.

7. What it doesn't do

Can it be improved? Are there desirable improvements that could make the program more user-friendly than it is? Don't get me wrong, this program is good and does everything it claims, and very well. I know my old English teacher would have loved to have this program to illustrate all my (and my classmates') poor prose. But there are additional things you wish the

program would do, if it were technically feasible. Here's my wish list:

- A 'dir' option to browse available files for loading, at least for those without Qmenu installed. Yes I know you can Ctrl C or whatever out and do a file listing, but the lack of this capability does detract from the attractiveness of the program.

- Ability to view the loaded document from within SC3.

- Ability to work on and amend 'style' faults as they are highlighted from within the program, and to resave the document in the original format. Is this what one would call checking documents 'on the fly'?

- A Standard Check progress meter to tell you the position of the sentence in the document, so you know how far through you are.
- Ability to scroll back through checked sentences including and beyond the current sentence.

Or maybe it would be nice if I stopped being so picky and just appreciated it for what it is. I do really. And did I dare get SC3 to check through this document? No, I didn't dare.



Missing Bits

Apologies to Wolfgang Lernerz and the readers: due to a bug in the DTP program, part of his BOOT program (article was published in Issue 1 Volume 4) was missing. Here is the missing bit:

```
2510 DATA "menu_rext",28216
2520 DATA "qmon_bin",12260,"jmon",15684,"qpac2",38430,"qptr_bin",9620
2530 DATA "file_bin",3896,"sub_bin",2342,"qLib_run_336mod",10552,'qref_bin',2478,
"qlib_bin",2910,'qlib_ext',1472,'qlib_ovl',1006
2540 DATA "clavier_bin",570,"outptr_bin",8606
2550 DATA "aff_bin",426,"qd2fi2_bin",2242,"emul_bin",1700,"cfg_bin",1126
2560 DATA "configure_bin",566,"engine_rext",25022,"minmaj_bin",734,"wset_bin",204
2570 DATA "qd",55802,"imp_bin",3558,"mkdbwin_bin",3946
2580 DATA "prtbuf_bin",1788,"setpos_bin",138,'is_proc_bin',1330
2590 DATA "dll_rext",1760,"syslib_rext",39812,"global_rext",1384
2600 DATA "pwbasic_rext",21870,"env_bin",826,"gline_bin",408,"word_config_bin",468
2610 :
2620 DEFine PROCedure ws
2630 LOCAl xp
2640   xp=xx+100
2650   WINDOW XLIM,YLIM,0,0:PAPER 0:CLS
2660   WINDOW#0, XLIM,YLIM-28,0,28:PAPER#0,0
2670   WINDOW#2, XLIM,YLIM-28,0,28
2680   INK 7:OVER 1 :CSIZE 2,1
2690   FOR n=1 TO 10
2700     CURSOR xp+n,100+n
2710     PRINT "WOLF Business Computer";
2720   END FOR n
2730   CURSOR xp+n,100+n
```

```

2740 INK 2:PRINT "WOLF Business Computer"
2750 CSIZE 0,0:INK 7
2760 OVER 0
2770 END DEFine ws
2780 :
2790 DEFine PROCedure time
2800 all_months$=""
2810 a$=make_date$(1)
2820 a$="Paris, le "&a$
2830 ERT HOT_KEY('d',a$)
2840 END DEFine time
2850 :
2860 DEFine FuNction make_all_months$
2870 REMark this makes a string "JanFeb..." in the current language
2880 LOCAL string$,lp%,a$,temp
2890 string$="":a$="":temp=0
2900 temp=60*60*24*31
2910 FOR lp%=0 TO 11
2920 a$=DATE$(lp%*temp)
2930 string$=string$&a$(6 TO 8)
2940 END FOR lp%
2950 RETURN string$
2960 END DEFine make_all_months$
2970 :
2980 DEFine FuNction make_date$(dflag%)
2990 REMark returns current date in form 01.01.1991 (if dflag%)
3000 REMark else in format 1991.01.31
3010 LOCAL a$,b$,res
3020 a$=DATE$
3030 b$=a$(6 TO 8)
3040 res= b$ INSTR all_months$
3050 IF NOT res
3060 all_months$=make_all_months$
3070 res= b$ INSTR all_months$
3080 END IF
3090 res=(res+2)/3
3100 b$=res:IF res<10:b$="0"&b$
3110 IF dflag%:RETURN a$(10 TO 11)&". "&b$&". "&a$(1 TO 4)
3120 RETURN a$(1 TO 4)&". "&b$&". "&a$(10 TO 11)
3130 END DEFine make_date$
3140 :
3150 DEFine FuNction find_mydrive$
3160 REMark this finds my primary QL hard disk
3170 LOCAL lp%,chan%,mydrive$
3180 DATA_USE ""
3190 FOR lp%=1 TO 8
3200 mydrive$='win'&lp%&'_'
3210 chan%=FOP_DIR(mydrive$)
3220 IF chan%>0:CLOSE#chan%:RETURN mydrive$
3230 END FOR lp%
3240 chan%=FOP_DIR('flp1_')
3250 IF chan%>0:CLOSE#chan%:RETURN 'flp1_'
3260 RETURN ""
3270 END DEFine find_mydrive$
3280 :

```

So, das war's nun aber wirklich...

Printer Control Codes - a dreaded Subject - Part 3

Dilwyn Jones

How do Printers cope with the different Character Sets of each Country?

These are usually referred to as the National Character Set for the country in question, where a few characters differ from country to country. Common sources of problems include accented characters, the hash symbol and currency symbols such as the British Pound Sterling symbol. Most printer manuals include a page which explains (usually by means of a table) which characters vary from country to country, and what they look like in each of the National Character Sets. Many European countries have their own character set - French, Spanish and Swedish, for example. Even English is not immune from this, as the U.S.A. and Britain have their own character sets. Don't get the idea that there are completely different character sets for each country, only a few characters vary within the code range 32 to 127, usually 35 and 96 cause English users the biggest problem. Software usually gets around this by allowing the user to specify Preamble codes codes which are sent to the printer to set any options applicable to the entire printout, such as choosing which country's character set to use. In practice, if writing programs for your own use, you'll have your printer set to the correct national character set for your country, so this problem does not arise.

A slightly bigger problem may be that the characters and their codes on the QL may not correspond exactly with the character set on a printer. To get around this, programs like Quill use Translate sequences. This treats the character sets on the QL and the printer as though they were two different languages and does any swapping of characters, or even switching character sets, necessary to get the characters to print as required. For example, a Spanish QL user wishing to ensure that his/her QL prints a British pound symbol would have to include as a translation a sequence of characters which says which of the Spanish QL character set represents a pound, then the control codes needed to switch the printer to a British character set, then send which character code prints as a pound symbol in the English character set, then finally sends the control codes to switch back to the normal Spanish character

set. Where the character set includes the required character, but it has a different code to that used on the QL, it is simply a matter of saying 'every time you need to print this, send this code instead', or something like this, assuming the character to be printed is in the string variable a\$:

```
IF CODE(a$) = 96 THEN PRINT #3,CHR$(35);  
:ELSE PRINT #3,a$;
```

A simple way to build up a translate table on the QL is to use a SElect construct. The characters which need to be changed to print can be given their own = statement, while the =REMAINDER clause prints the rest unaltered. Again, the character to be printed is in a\$, our routine translates it into a character held in p\$ which is then printed.

```
LET cde = CODE(a$) : LET p$ = ''  
SElect ON cde  
= 35 : p$ = CHR$(96)  
= 96 : p$ = CHR$(137)  
= REMAINDER : p$ = a$  
END SElect  
PRINT #3,p$;
```

Some Printer Commands specify Names like NUL, BEL, ESC etc.

What does this mean?

It's an old method of giving names to important control codes. While it is not vitally important you learn these names and their meanings, you may find it useful from time to time to have a table that lists which code corresponds to which names for the codes 0 to 31. If you think you have seen these before, you may have noticed them in your printer manual (many list them) or when using INSTALL.bas to create a Quill printer driver which includes codes 0 to 31 (see table 1).

Before embarking on writing programs which need to work with many types of printers, you may find it a useful exercise to create a spreadsheet listing the equivalent codes for the various functions on all the printer types you encounter and become familiar with. You'll be surprised to find that the various command sets do have some common ground,

Table 1

0	NUL
1	SOH
2	STX
3	ETX
4	EOT
5	ENQ
6	ACK
7	BEL
8	BS
9	HT
10	LF
11	UT
12	FF
13	CR
14	SO
15	SI
16	DLE
17	DC1
18	DC2
19	DC3
20	DC4
21	NAK
22	SYN
23	ETB
24	CAN
25	EM
26	SUB
27	ESC
28	FS
29	GS
30	RS
31	US

TF Services

superHermes

A major hardware upgrade for the QL

- All Hermes features (see below for list) PLUS full 19200 throughput on ser1/ser2 not affected by sound
- IBM AT keyboard interface (plus foreign drivers)
- HIGH SPEED RS232 industry standard two-way serial port. 4800cps throughput (supergoldcard - qtpi - zmodem) at 57600bps
- THREE low speed RS232 inputs (1200 to 30bps) Driver for SERIAL MOUSE supplied. Other uses include RTTY/graphics tablet etc
- THREE spare I/O lines (logic) with GND/+5V
- Capslock/scrolllock LED connector
- Turbo/Keylock connectors
- 1.5k user data permanently storeable in EEPROM

All this on a professional board about twice the size of the 8049 co-processor it replaces

Cost (including manual/software) **£90** (£92/£87/£90)
 IBM AT UK layout Keyboard **£22** (£24/£23/£27)
 Serial mouse **£11** (£13/£12/£14)
 Capslock/scrolllock LED **£1** (£1.50/£1/£1.50)
 Keyboard or mouse lead **£3** (£3.50/£3/£3.50)
 High speed serial (ser3) lead **£4** (£4.50/£4/£4.50)

Hermes available for **£25** (£26/£24/£27) Working ser1/2 and independent input, debounced keyboard & keyclick.

superHermes LITE

All Hermes features (see above) + an IBM AT keyboard interface only. Entry level superHermes.
 Cost (incl keyboard lead)...**£53** (£55.50/£51/£53.50)

Minerva

MINERVA RTC (MKII) + battery for 256 bytes ram. CRASHPROOF clock & I²C bus for interfacing. Can autoboot from battery backed ram. Quick start-up.

The ORIGINAL system operating system upgrade

OTHER FEATURES COMMON TO ALL VERSIONS

DEBUGGED operating system/ autoboot on reset of power failure/ Multiple Basic/ faster scheduler- graphics (within 10% of lightning) - string handling/ WHEN ERROR/ 2nd screen/ TRACE/ non-English keyboard drivers/ "warm" fast reset. V1.97 with split OUTPUT baud rates (+ Hermes) & built in Multibasic.

First upgrade free. Otherwise send **£3** (+£5 for manual if reqd). Send disk plus SAE or two IRCs

MKI...**£40** (£41/£40/£43) MKII...**£65** (£66/£63/£67)

QL REPAIRS (UK only)

Fixed price for unmodified QLs. excl microdrives. QLs tested with Thorn-EMI rig and ROM software.

£27 including 6 month guarantee

QL RomDisq

Up to 8 mbyte of flash memory for the QL

A small plug in circuit for the QL's ROM port (or Aurora) giving 2, 4 or 8 mbytes of permanent storage - it can be thought of as a portable hard disk on a card, and reads at some 2 mbytes per second.

Think of it - you could fully boot an expanded QL, including all drivers/SMSQ etc off RomDisq at hard disk speed with only a memory expansion needed.

2 mbytes RomDisq.....**£39** (£41/£37/£40)
 4mbytes RomDisq.....**£65**(£66/£63/£67)
 8 mbytes RomDisq.....**£98** (£100/£95/£99)
 Aurora adaptor.....**£3** (£3.50/£3/£4)

MPLANE

A low profile powered backplane with ROM port

A three expansion backplane with ROM port included for RomDisq etc. Aurora can be fitted in notebook case and powered off single 5V rail - contact QBranch for details. Two boards (eg Aurora and Gold Card/Super Gold Card/Goldfire fixed to base. Suitable for Aurora (ROM accessible from outside) & QL motherboard in tower case. Specify ROM facing IN towards boards, or OUT towards back of case.

Cost.....**£34** (£36/£33/£35)

I2C INTERFACES

Connects to Minerva MKII and any Philips I²C bus

Power Driver Interface 16 I/O lines with 12 of these used to control 8 current carrying outputs (source and sink capable)

2 amp (for 8 relays, small motors) **£40** (£43/£38/£44)

4 amp total (for motors etc)..... **£45** (£48/£43/£50)

Relays (8 3a 12v 2-way mains relays (needs 2a power driver)..... **£25** (£28/£23/£27)

Parallel Interface Gives 16 input/output lines. Can be used wherever logic signals are required. **£25** (£28/£23/£27)

Analogue Interface Gives eight 8 bit analogue to digital inputs (ADC) and two 8 bit digital to analogue outputs (DAC). Used for temperature measurements, sound sampling (to 5 KHz), x/y plotting **£30** (£31.50/£29/£30)

Temp probe (-40°C to +125°C)..... **£10** (£10.50/£10/£11)

Connector for four temp probes **£10** (£10.50/£10/£11)

Data sheets..... **£2** (£2.50/£2/£3)

Control software & manual (for all I/F) . **£2** (£2.50/£2/£3)

QL SPARES

Keyboard membrane..... **£12** (£12.50/£12/£13.50)

1377 PAL..... **£3** (£3.50/£3/£4)

Circuit diagrams..... **£3** (£3.50/£3/£4)

68008 cpu or 8049 IPC **£8** (£8.50/£7.50/£9)

8301/8302 or JM ROM or serial lead . **£10** (£11.50/£10/£11)

Power supply (sea mail overseas) **£12** (£17/£16/£21)

Other components (sockets etc) also available

Prices include postage and packing (Airmail where applicable). Prices are: UK (EC/Europe outside EC/Rest of world). Payment by cheque drawn on bank with UK address, debit card/Mastercard/Access/Eurocard/postal order or CASH! (No Eurocheques). SAE or IRC for full list and details

19 Dec 98

VISA

29 Longfield Road, TRING, Herts. HP23 4DG
 Tel: 01442-828254 Fax/BBS: 01442-828255
 tony@firshman.demon.co.uk http://www.firshman.demon.co.uk

MasterCard

differences too, especially in the way they handle text sizes, character definitions and how they print graphics.

I hope you will have seen that programming for printers is not the easiest of subjects to master, and that the insights offered will give you some insight into how difficult a programmer's life can be trying to cope with all the possibilities his/her program will have to deal with.

Finally, I have included a table below, listing equi-

valent codes for the four types of command set I've come across. The letter 'n' is used to denote where a number has to be specified, e.g. the number of the font to be used. Where I have left a given entry blank, or marked it as n/a it either means the facility does not exist in the command set, or that simply I don't know what the control code is (even someone who's been using a QL since they first came out hasn't had to learn them all!)

	EPSON	IBM	CANON	HEWLETT-PACKARD
BACKSPACE	8	8	8	8
LINEFEED	10	10	10	10
CARRIAGE RETURN	13	13	13	13
FORMFEED	12	12	12	12
TAB ACROSS	9	9	9	9
BOLD ON	27,69	27,69	27,69	27,40,115,51,66
BOLD OFF	27,70	27,70	27,70	27,40,115,48,66
2-STRIKE ON	27,71	27,71	27,71	n/a
2-STRIKE OFF	27,72	27,72	27,72	n/a
ITALICS ON	27,52	28,52	n/a	27,40,115,49,83
ITALICS OFF	27,53	28,53	n/a	27,40,115,48,83
UNDERLINE ON	27,45,1	27,45,1	27,45,1	27,38,100,49,68
UNDERLINE OFF	27,45,0	27,45,0	27,45,0	27,38,100,64
NLQ PRINTING	27,120,1	27,120,1	n/a	27,40,115,50,81
DRAFT PRINTING	27,120,0	27,120,0	n/a	27,40,115,49,81
CHARACTER SET n	27,82,n	27,82,n	n/a	27,40,n1,n2
COLOUR n	27,114,n	27,114,n	27,91,77,n1,n2,m	27,42,118,<colour>,83
FONT n	27,107,n	27,107,n	n/a	27,40,115,n1,n2
RESET PRINTER	27,64	27,64	n/a	27,69
CONDENSED PRINT ON	15	15	15	27,40,115,49,54,46,54,55,72
CONDENSED PRINT OFF	18	18	18	27,40,115,49,48,72
DOUBLE WIDTH ON	14 or 27,87,1	14 or 27,87,1	14 or 27,87,1	n/a
DOUBLE WIDTH OFF	20 or 27,87,0	20 or 27,87,0	20 or 27,87,1	n/a
ELITE (12 cpi) ON	27,77	27,58	27,58	27,40,115,49,50,72
ELITE OFF (Pica on)	27,80	18	18	27,40,115,49,48,72
SUBSCRIPT ON	27,83,1	27,83,1	27,83,1	27,40,115,,45,49,85
SUPERSCRIPIT ON	27,83,0	27,83,0	27,83,0	27,40,115,43,85
SUB/SUPER OFF	27,84	27,84	27,84	27,40,115,48,85
PROPORTIONAL SPACE ON	27,112,1	27,80,1	27,80,1	27,40,115,49,80
PROPORTIONAL OFF	27,112,0	27,80,0	27,80,0	27,40,115,48,80
LEFT MARGIN n	27,108,n	27,108,n	}27,88,left,	27,38,97,<margin>,76
RIGHT MARGIN n	27,81,n	27,81,n	} right	27,38,97,<margin>,77
PAGE LENGTH (lines)	27,67,n	27,67,n	27,67,n	27,38,108,<lines>,70
BOTTOM MARGIN (lines)	27,78,n	27,78,n	n/a	27,38,108,<lines>,69
TOP MARGIN (lines)	27,99,n	27,99,n	n/a	n/a
UNIDIRECTIONAL PRINT	27,85,1 or 27,85,49	27,85,1	27,85,1	27,38,107,48,87
BIDIRECTIONAL PRINT	27,85,0 or 27,85,48	27,85,0	27,85,0	27,38,107,49,87

Assembly Language Programming

- Part 6

Norman Dunbar

Here we are in part 6 of the articles on Assembly language. Is anyone still with me? This article is being written at home,

on my own PC (shock horror!) As I have not been sent off to visit customers this week - next week, who knows?

What's Going On?

Last issue was not a tutorial article, it was a part of QLDis - the project. This will be the manner of things from now on. There will be an article on assembly language followed by the next instalment of QLDis. This saves me from having too much space in every issue, it saves there being masses of

assembly code each time - some people don't have any interest in assembler - and it saves me having to write two articles each time!

Oops, bugs already

Well now. Part one of QLTDIS has a nasty bug in it and for this I apologise. Strangely enough, it is related to a letter from George Gwilt - see below - but can cause QLTDIS to crash the QL when no printer device is specified. The following changes MUST be made to INIT_ASM:

First, at label GET_PRINTER add the two lines after 'bsr input':

```

        bsr    input          ; Wait for user input
*-----
* Next two lines added in case user didn't specify a printer device ...
*-----
        tst.w  d1             ; Check user specified a device
        beq.s  clr_scr       ; No device specified

```

Finally, add a label (clr_scr) to the following line:

```

clr_scr  movea.l  con_id2(a4),a0 ; Output console id
        bsr    clr          ; Clear screen

```

That is all there is to it. If you didn't enter a printer name, the code will attempt to copy 65,536 bytes of rubbish all over your QL's memory which will more than likely cause it to crash or lock up. The following explains the problem.

Matters Arising

In issue 6 of volume 3, there is a letter from George Gwilt who points out a few things about DBRA type loops and my comments on how they should be written. If you take a look at my article in issue 5 of volume 3 (pages 25 and 26) you will see two examples of how to write a DBRA type loop.

George points out that while example 2 is better in terms of readability, there could be problems if the value in the counting register is zero. As George says, the method of subtracting one from the counter then dropping into the loop could lead to a loop that performs 65536 times rather than zero times - how can this be?

Ok, this code is called from another part of some program with the loop counter in D1.W:

```

loopy_bit  SUBQ.W  #1,D1
loop       BSR    do_something
          DBRA   D1,loop
          RTS

```

Why would this fail, or more to the point, when? Imagine if D1.W was 1 then the above subroutine called, what would happen? Well, remember how the DBCC instructions operate in three parts: First, the condition is tested to see if it is true. In this case, the condition is ignored as the DBRA instruction will always loop - until ...

Second, the lowest word of D1 is decremented by one. Then tested to see if it is -1 yet. If it is, the loop is not taken and the RTS is executed.

Third, If the counter register is not -1 then the loop is taken to the code at label 'loop'.

So, with D1 set to 1 on entry, the loop is carried out once, then terminated. No worries here. What happens if D1 was set to zero on entry?

D1 would be set to -1 by the SUBQ.W instruction, then the code at 'do_something' would be executed - but we had a zero count so this is wrong straight away. On return, the condition test would be checked - but there is no condition with DBRA. Then D1 would be decremented to -2 (!!!!). This does not equal -1 so the branch would be taken and taken again and again until D1 once more became -1. Then it would have been executed 65,536 times too many!

So beware. I can highly recommend the following code instead:

```

loopy_bit  BRA.S  skippy_bit
loop       BSR   do_something
skippy_bit DBRA  D1,loop
          RTS

```

Which will always avoid the above problem. Now if D1 was zero, it will be decremented to -1 when it skips to the DBRA instruction and this will correctly terminate the loop.

So keep in mind the fact that the loop stops when the counter reaches -1 and that the counter is decremented before testing for -1. Also bear in mind that George is a far better assembler programmer than I am - if he says something, believe it!! (George wrote the GWASL assembler given away on the cover disc recently.) So now you know why the bug in INIT_ASM occurs, and why I have changed the code to fix it. As an exercise - how else could I have fixed it - see the end of the article for the answer. No cheating!

Thanks for pointing out the potential problems George.

A Few Quickies!

This section deals with a few instructions that the QL programmers rarely, if ever, use. These instructions are:

```

CHK
ILLEGAL
RESET
RTR
STOP
TRAPV

```

The **CHK** instruction has the format:

```
CHK <ea>,Dn
```

and causes an exception to be generated if the value in Dn.W is less than 0 or greater than the value in the effective address. On a normal QL this is totally ignored - the exception that is - however, with a bit of deft QDOS programming, this can be redirected to your own routine. I have never seen this done in any programs - yet! By the way, the value in the effective address is a two's compliment signed number. The flags affected are:

N - set if Dn.W is less than zero, cleared is Dn.W is greater than the effective address value. Otherwise it is undefined.
Z - undefined.
V - undefined.
C - undefined.
X - unaffected.

The format of the **ILLEGAL** instruction is quite simply:

```
ILLEGAL
```

and all it does, by default, is to crash the QL! It can however be redefined to do something useful as with the CHK instruction. (We may get around to covering QDOS stuff in a much later episode.) This instruction also causes an exception to be generated. No condition codes are affected.

The **RESET** instruction has the format:

```
RESET
```

and causes the 'reset' line to be 'asserted' causing all external equipment interfaced to the processor to be reset. On the QL, it actually causes a system reset - similar to you pressing the reset switch. This instruction will only be executed if the processor is running in supervisor mode, in user mode, all that happens is that the program counter is incremented by 2 to skip over this instruction. No flags are affected.

RTR has the format:

```
RTR
```

and is actually equivalent to the following two instructions:

```
MOVE (A7)+,SR
```

```
RTS
```

However, the MOVE (A7)+,SR instruction is privileged on the 68000 so can only be run in supervisor mode. Using RTR is not privileged so the two instructions can be combined as one. This is a useful instruction for subroutines where the status register is saved on the stack on top of the return address. The following code is an example.

```
start BSR example  
; more code here
```

```
example MOVE SR,-(A7) ; Stack the status register etc  
; do some code here  
RTR ; Unstack the status code
```

What happens when a subroutine is called is that the return address is placed on the stack and then the subroutine jumped to. In this example the status register is placed on the stack as well. This is a word sized SR on top of a long sized Program Counter.

The subroutine carries out various bits of processing - probably trashing the status codes etc as it does so. At the end, the old SR is put back into the SR and the return address placed in the PC by the RTR instruction.

It is a quirk of the 68000 that the instructions to move data from the SR are not privileged while those that move data into the SR are privileged. This is a handy way around this restriction.

Obviously, the various flags in the SR are changed according to the word removed from the stack EXCEPT FOR THE SUPERVISOR BIT WHICH IS UNCHANGED!

The **STOP** instruction has the format:

```
STOP #data
```

and causes the processor to put the word of data into the SR, increment the PC to point at the instruction following this one, and then the processor just stops - until any trace, interrupt or reset exceptions are generated. The interrupt must be higher than the current processor interrupt level to have any effect. The flags are set according to the data word in the instruction. This is another privileged instruction and is the processor is in user mode, and a privilege violation exception will be generated.

The **TRAPV** instruction has the format:

```
TRAPV
```

and is used to cause an exception if the V flag is set. (Overflow flag). Normally this is ignored on a QL but can be redirected with the afore mentioned QDOS jiggery pokery to do something useful. No flags are affected.

A Few Little Bits ...

This section deals with instructions that check, change, set or otherwise fiddle about with the individual bits in a register or memory address. All of these instructions have a similar format, which is:

```
Bxxx Dn,<effective address>  
Bxxx #data,<effective address>
```

CAMBRIDGE

Z88

OFFICE/FAX 01494-871319 (EEC) *W.N. Richardson & Co.*

MOBILE: 07808 576118

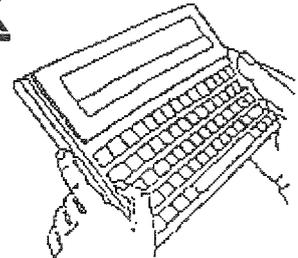
E-MAIL: WNR@COMPUSERVE.COM

6 Ravensmead
Chalfont-St-Peter
Buckinghamshire SL9 0NB

THE IDEAL PORTABLE COMPANION FOR THE QL, PC AND MAC.

THE CAMBRIDGE Z88 A4 NOTEBOOK

WITH BUILT-IN WORD PROCESSOR, SPREADSHEET, DATABASE, BASIC, CALCULATOR, CLOCK, ALARM, CALENDAR & VT52 TERMINAL.
USES 4XAA ALKALINE CELLS (ca. 20 HOURS) *



WE DO REPAIRS, PART EXCHANGES, AND BUY Z88's & PARTS

NEW! CAMBRIDGE Z88 WITH OZ4+512k Internal Ram £150

ALSO AVAILABLE, 512k RAMPACK £40

DESCRIPTION	UK	USA
CAMBRIDGE Z88 ISSUE4-128K	£120	\$180
CAMBRIDGE Z88 COMPUTER	£99	\$130
☆ RECONDITIONED Z88	£60	\$90
32k RAMPACK	£18	\$25
128k RAMPACK	£38	\$50
32k EPROM PACK	£18	\$25
128k EPROM PACK	£24	\$33
256k EPROM PACK	£55	\$75
EPROM ERASER	£32	\$43
PARALLEL PRINTER LEAD	£39	\$50
SERIAL PRINTER LEAD	£12	\$16
* MAINS ADAPTOR (230vac: 6v,500ma)	£10	
TOPPER (PROTECTIVE COVER)	£12	\$16
CARRYING CASE (PLASTIC)	£10	\$12
FILE TRANSFER TO OTHER COMPUTERS		
SPECIAL Z88-QL SERIAL LEAD	£10	\$15
COPY DISKS OF QUANTA PROGS IMP/EXP & ARCHIVE EXPORT	£2	\$3
PCLINK KIT (For PCs) }	£25	\$35
Z88 TO MAC KIT }	£25	\$35
Z88 TO BBC KIT }	£25	\$35

**1/2 PRICE
STARTER PACK
1 - Z88 ☆ PLUS
TRANSFER KIT
+ 32K RAM
+ 32K EPROM
£72 ONLY!!**

POSTAGE UK UP TO £5. EEC £15. USA £20. OTHER COUNTRIES £30.

ALL THE STOCK IS WARRANTIED FOR 90 DAYS. IN THE EVENT OF REPLACEMENT BEING ARGREED, BUT THE ITEM BEING OUT OF STOCK AT THE TIME, A REFUND WILL BE MADE PROVIDED THE ITEM IS RECEIVED IN GOOD CONDITION.

QL & PC COMPUTER USERS WILL FIND THE CAMBRIDGE Z88 ESPECIALLY USEFUL FOR WORK AWAY FROM THE DESKTOP, WITH TRANSFER PROGS DATA CAN BE SAFELY EXCHANGED WITH THEIR DESKTOP SYSTEM.

W.N.RICHARDSON & CO CONTINUES TO PROVIDE FULL SPARES AND SERVICES FOR SINCLAIR COMPUTERS, QL & THE CAMBRIDGE Z88

They all TEST the bit about to be fiddled with BEFORE fiddling with it. The flags are set according to the state of the bit BEFORE the fiddling was done. Remember this important fact. The bit number is either supplied in a data register or as immediate data.

When the bit number is being processed the 68000 makes sure that it is in range for the actual data being operated on. If the effective address is a data register (you cannot use these instructions on address registers) then the actual bit number is bit number MOD 32.

If a memory address is being manipulated, the range is adjusted to be 0 to 8 using bit number MOD 8.

The flags are all unaffected except for the Z flag which takes the state of the 'previous' value of the bit being manipulated.

The instructions are:

BCHG or Bit Change, which sets the Z flag to the bit affected and then changes the bit from a 1 to a zero or from a zero to a 1.

BCLR or Bit Clear, which always puts a zero into the affected bit.

BSET or Bit Set, which always puts a 1 into the affected bit.

BTST or Bit Test, which sets the Z flag to the state of a bit. If the affected bit is a zero, the Z flag is set to show this. If it was a 1 then the Z flag will be reset to show this.

This family of instructions are very useful when using a byte, word or long to hold 8, 16 or 32 different flags in a program as each one can be tested, set or reset individually and this takes place within QDOS in a number of places.

As a small example, imagine you were writing a program and you needed to check when the user typed an UPPERCASE character. Rather than checking every one for 'A' and 'Z' (which only apply to the English language remember, you could set up a bitmap table of 256 bytes and have a single bit represent uppercase, another could be for numeric, another for control/unprintable characters etc etc. As each character was read, index into the table on that character code and check the appropriate bit.

```

;
; Some code above to get a character from the user/file etc
; Assume D1.W holds the character code. Top 8 bits are zero.
; Assume that bit 0 is the uppercase/lowercase flag bit.
;

```

```

check LEA bitmap,A1      ; A1 is address of the bitmap table
      BTST #0,(A1,D1.W)  ; Is it uppercase ?
      BEQ.S upper       ; Yes, if bit zero is set

lower  ; process lowercase here

upper  ; process uppercase here

bitmap ; 256 bytes go here, one for every character.

```

The bitmap table has a single byte for each available character 0 to 255 and sets the bits in each one according to the character type. In this example we use bit 0 for upper/lower case only so wastes 7 bits of each byte, but remember, these extra bits could be used to define control characters, digits, hex digits, alphabetic, alpha-numeric, punctuation etc.

The advantage to this method is that different tables can be loaded for different languages. The disadvantage is that the program will be slightly longer because of the need to store the table.

Testing, Testing.

In QLdis, I have used the TST instruction to compare a value against zero. This is a useful instruction and replaces CMPI.size #0,Dn. The format is:

```
TST.size <effective address>
```

The flags are set differently from CMPI as well as the V and C flags are always cleared to zero. CMPI doesn't do this. The flags are
 N is set if the operand is negative, reset if positive.
 Z is set if the operand is zero, reset otherwise.
 V is always cleared.
 C is always cleared.
 X is not affected.

Why use TST when CMPI will do as good a job?

Well it is all down to three things really:

Do you want to use TST or CMPI #0?

Do you need to preserve the V and C flags?

TST is quicker. TST takes 8 clock cycles while CMPI takes 16, 24 or 26 depending on the operation. Both take the same time to work out the effective address calculation, but TST also needs fewer read cycles - 2 - while CMPI needs 4 or 6.

TAS is another testing instruction, which actually does two separate operations in one single **UNINTERRUPTABLE** step. The format is:

```
TAS <effective address>
```

The size is always byte and need not be specified. The flags affected are:

N is set if bit 7 of the operand was set, otherwise cleared.

Z is set of the operand was zero, Reset otherwise.

V is always cleared.
C is always cleared.
X is not affected.

The instruction reads the byte at <effective address>, checks bit 7, sets the flags and then sets bit 7. The modified byte is written back to the effective address. It is similar to the following code:

```
BTST    #7,<effective address>
BSET    #7,<effective address>
```

Obviously there are two instructions here which alter the flags, however, TAS does it in one. The main point about TAS is that it is a single instruction which cannot be interrupted once it has started. This makes it useful for multi tasking or multi processor systems where any sequence of instructions can be interrupted.

In the above example, the system could be interrupted by a floppy disc I/O request between the end of the BTST and the start of the BSET. This could result in a new value being placed into <effective address> by the interrupting routine. The BSET would then possibly give the wrong results after it executed.

This will not ever happen with the TAS instruction. If the above code was being used in a multi processor system to synchronise access to some system resource, the two instructions could lead to mis-synchronisation. Using TAS would not allow this to happen.

Finally in this section, although not quite a testing instruction, is the 'set according to condition code' instructions. These have the format:

```
Scc <effective address>
```

The size is always byte and is not specified. What happens is that the condition code is tested, and if found to be true, the byte in <effective address> is changed to be all ones otherwise it is changed to be all zeros. The condition codes are as for Bcc, DBcc

This sets a memory address or a byte in a register to 255 or 0 for True or false. On QDOS systems we tend to use 1 for true and 0 for false. How can we quickly change from 255 and zero to 1 and zero?

The answer is quite simple, 255 is an unsigned number but if it was signed, it would be -1. Simply follow the Scc instruction with NEG.B as follows:

```
; Do some code here to set condition flags.

SMI    D1    ; Set D1.B to $FF if 'something' was minus
NEG.B  D1    ; D1.B now is $01 or $00 which is what we want !
```

And Finally?

I think we are just about finished covering all those boring instructions, but we still have a couple to do yet. These don't really fall under any of the headings I have used up til now, so I simply add them on at the end!

On the QL, assembly language programs must be written so that they are 'relocatable'. All this means is that you must not assume that your code will always run from a specific address but that it could run from ANY address.

The LEA instruction which has been used quite a lot in QLdis already allows just this to happen. This has the format:

```
LEA <effective address>,An
```

None of the flags are affected. So, a quick bit of revision, what is the difference between the following two instructions?

```
MOVE <effective address>,A1
LEA <effective address>,A1
```

MOVE calculates the effective address and reads its contents into A1 while LEA calculates the effective address and puts that into A1, not its contents.

This allows position independant code to be written and is a very much used instruction in QDOS programs. It also helps get around the fact that PC relative mode addressing is forbidden as the destination in a MOVE instruction. The following code will not assemble:

```
MOVE.L D0,buffer(PC)
```

But this will, and does what is required:

```
LEA    buffer,A1
MOVE.L D0,(A1)
```

There is a similar instruction called Push Effective Address and this has the format:

```
PEA <effective address>
```

and simply calculates the effective address and puts it onto the stack. The stack pointer is predecremented and none of the flags are affected. All this is very similar to the following:

```
LEA    some_code,A1    ; Get the address of label some_code into A1
MOVE.L A1,-(A7)        ; Stack it
```

But why would you use PEA to do this rather than the above, and what use is it afterwards? Apart from it being shorter to code - one instruction instead of two - it doesn't require a register to be used. The address is on the stack, so what next?

Think about these instructions:

```
PEA    some_code,A1    ; Get the address of label some_code into A1
RTS
```

What has just happened? The address of the routine at 'some_code' has been placed on the stack, then when RTS is executed, it returns control to the address WHICH IS ON THE STACK. So this is another way of doing this:

```
LEA    some_code,A1
JSR    (A1)
```

Why would you use this? I have absolutely no idea! But it is important to note that the first method will NEVER return to the address after the RTS because there is no return address on the stack. The second and 'normal' method will return to the address after the JSR (A1) as the JSR stacks its return address.

The next and final two instructions are seldom used in normal assembler programs on the QL - at least, I have never seen one in all my years of reading & writing code. They are probably used most by the code generated by various compilers that exists for the QL so that 'stack frames' can be built and parameters passed to sub-routines created by the compiler. The two instructions are **LINK** and **UNLK** and they do not affect any flags.

The **LINK** instruction has the format:

```
LINK An,#displacement
```

and carries out the following actions:

First the stack pointer is decremented by 4. Then, the current contents of An are copied onto the stack. Then the stack pointer is copied to An. Finally, the stack pointer has the displacement ADDED to it.

UNLK has the format:

```
UNLK An
```

and carries out the reverse of the LINK instruction in that the stack pointer is reloaded from An, then An is reloaded from the value on the stack and the stack pointer is incremented by 4.

Assuming that A7 is currently holding value \$20000 and A4 is holding \$00123456 the the sequence of instructions:

```
LINK A4,-$10
do something here ...
UNLK A4
```

will result in the following:

A7 will be decremented by 4 to \$1fffc
A4 will be stored at this address (\$1fffc)
A4 will then have \$1fffc loaded into it
A7 will have \$10 subtracted (because we supplied a negative displacement) to give \$1ffec.

This means that the code between the LINK and UNLK instructions can use the free space between (a7) and -4(A4) for working space. There

are 16 bytes available for use between these addresses and they can be accessed using A4 as a 'stack frame pointer' and using negative offsets.

Once the UNLK instruction is reached, we must not have changed the value in A4 or all hell will break loose!

A7 is set to the value in A4 which should be \$1fffc. A4 will be set to the long word at 0(a7) which is where its original value of \$00123456 was stored by the LINK instruction. A7 will have 4 added to it giving the original \$20000 that we had when the LINK was executed.

So Here We Are!

Well, that is the end of the most boring part of this series. I apologise for the dreary nature of the previous few episodes but I can't think of any other way to make a micro-processor's instruction set interesting reading!

We have now covered all the 68008 instructions and the time has come to start putting the information into practice. However, when I was learning all about 68000 assembly language, there were a few concepts that gave me troubles - and I still have to look them up even today!

To make things a bit easier for you, here are my bug-bears and an explanation of how to get around them.

Comparing Things

Comparing registers or registers and values etc always gives me problems. I can never remember which flags are set or which ones to check when using signed or unsigned values. The following should hopefully make life easier. Remember, when using the CMP instruction, you should read it as 'if destination condition source'.

Equality checks - signed and unsigned are the same.

```
CMP.L D0,D1
BEQ.S equal ; if d1 = d0 goto equal.
Or
CMPI.L #10,D1
BEQ.S equal ; if d1 = 10 goto equal.
```

Non equality checks - signed and unsigned are the same.

```
CMP.L D0,D1
BNE.S not_equal ; if d1  $\neq$  d0 goto not_equal.
Or
CMPI.L #10,D1
BNE.S not_equal ; if d1  $\neq$  10 goto not_equal.
```

Greater than - unsigned only.

```
CMP.L D0,D1
BHI.S greater ; if D1 > D0 goto greater.
```

```

Or
  CMPI.L #10,D1
  BHI.S greater ; if D1 > 10 goto greater.

```

Greater than - signed only.

```

  CMP.L D0,D1
  BGT.S greater ; if D1 > D0 goto greater.

```

Or

```

  CMP.L #-5,D1
  BGT.S greater ; if D1 > -5 goto greater.

```

Greater Than or Equal - unsigned only.

```

  CMP.L D0,D1
  BCC.S greater_eq ; if (D1 >= D0) goto greater_eq

```

Or

```

  CMPI.L #5,D1
  BCC.S greater_eq ; if (D1 >= 5) goto greater_eq

```

Greater Than or Equal - signed only.

```

  CMP.L D0,D1
  BGE.S greater_eq ; if (D1 >= D0) goto greater_eq

```

Or

```

  CMPI.L #-5,D1
  BGE.S greater_eq ; if (D1 >= -5) goto greater_eq

```

Less than - unsigned only.

```

  CMP.L D0,D1
  BCS.S less ; if D1 < D0 goto less

```

Or

```

  CMPI.L #5,D1
  BCS.S less ; if D1 < 5 goto less

```

Less than - signed only.

```

  CMP.L D0,D1
  BLT.S less ; if D1 < D0 goto less

```

Or

```

  CMP.L #-5,D1
  BLT.S less ; if D1 < -5 goto less

```

Less than or equal - unsigned only.

```

  CMP.L D0,D1
  BLS.S less_eq ; if D1 <= D0 goto less_eq

```

Or

```

  CMPI.L #10,D1
  BLS.S less_eq ; if D1 <= 10 goto less_eq

```

Less than or equal - signed only.

```

  CMP.L D0,D1
  BLE.S less_eq ; if D1 <= D0 goto less_eq

```

Or

```

  CMPI.L #10,D1
  BLE.S less_eq ; if D1 <= 10 goto less_eq

```

Signed Numbers being MOVED

Remember also that flags and conditions are set when data is MOVED into data registers, or after arithmetic etc, so the following are valid as well. Obviously, the following code will not work correctly if you find this in a real program - don't use it!

```

MOVE D1,D0 ; Copy D1 to D0 & set flags accordingly
BEQ.S D1_is_zero ; D1 is now zero
BNE.S D1_is_not_zero ; D1 is not zero
BGE.S D1_is_0_or_more ; D1 is now zero or greater
BPL.S D1_is_0_or_more ; Ditto
BGT.S D1_is_1_or_more ; D1 is now greater than zero
BLE.S D1_is_0_or_less ; D1 is now less than zero
BLT.S D1_is_negative ; D1 is now less than zero
BMI.S D1_is_negative ; Ditto

```

Answer To INIT_ASM Bug Fix Exercise
Have you figured it out then or are you cheating?

The fix I made explicitly checks the size of the printer device name and if zero skips over the 'move to storage' part of the code. The other fix is to change the code as follows:

First, change the line at GET_PRINTER from 'subq.w #1,d1' to 'bra.s move_byte'. Second, add a label (MOVE_BYTE) to the line under MOVE_PRNAME. The new GET_PRINTER code looks like this:

```

*-----
* Ask for additional file/printer device
*-----
get_printer lea print_dev,a1 ; Our prompt
            bsr prompt ; Print it
            bsr input ; Wait for user input

            lea pr_dev,a0 ; Storage for printer name
            move.w d1,(a0)+ ; Save filename length

            bra.s move_byte ; Move printer to safe storage

move_prname move.b (A1)+,(A0)+ ; Move a single character
move_byte dbra d1,move_prname ; And the rest

```

Next issue, QLTD is part 2 where I explain how each instruction will be 'cracked'. See you there.

Adventures on the QL - Part 3: Squadies

Darren Branagh

In the first two parts of this adventures review series, I looked at two commercial programs, both by RWAP software. In this, the third instalment, it's time to look at a Shareware program - SQUADIES

SQUADIES is a text adventure like the previous two, and like THE PRAWN, is a tongue in cheek humorous game, which is equally if not more fun to play. It all revolves around a military boot camp in the Falklands war, where you are a lowly private just trying to get through the daily, sometimes not too pleasant (including the sheep dip), tasks of

the army life, at least until the flight ticket you've requested arrives from the movements clerk. So, you visit the clerk on a daily basis, hoping each time it will be your last. Of course, around the island there are various items and characters to help you in your task. You got sent there in the first place for getting caught by your former RSM (Regimental Sergeant Major) sleeping with his daughter, which shows the mood and setting of this game.

STARTING UP

The game starts with a screen displaying the version number (the version

I played was 1.63) and the author, R.J. Weeks, one time QL Trader - Pointer Products. Quickly a scene setting paragraph is displayed outlining the task ahead, in which a useful clue is displayed - the movements clerk is rumoured to be a player of the pink oboe. The software company responsible is displayed on top of the screen - Flatulent Software. Told you it was funny.

The instructions consist of one page of text in a file called Text.TXT, although it is enough to get you started, and gives details of how to register the software (since it's Shareware). The game is playable without registering, but you won't get any help from the author. It only costs 5 pounds to register.

The BOOT program installs a basic extension to allow the program to set a new font for its display output.

I should mention here that this game is STRICTLY for over 18's - it does contain lots of bad language, sexual jokes etc, which would be unsuitable for children, so it's just for adults who aren't easily offended - be warned!

Pressing any key then begins the game, and the first description is displayed. Sadly, it doesn't have a cursor at this point, so if you have EXEC'ed it, and are not using pointer environment, tough luck, you're locked out of the game.

GAMEPLAY & LAYOUT

The gameplay is sharp and responsive and the new scenes are generated very fast indeed, so no problems there. The game layout is good, with a nice original font being used for the lettering, although all the text throughout the game is solely in green which can be dull to look at after a while.

The commands parser is a simple verb-noun type entry - you can only enter simple commands like **TAKE SHOVEL** or **KILL BEAST**, or **GO NORTH**. This is not an uncommon restriction in many text adventure games, especially public domain or freeware ones. Although it is in fact possible to chain com-

mands together by using And and Then, e.g. the example in the instructions is: **GET BRUSH AND GO NORTH THEN DROP TROUSERS**

Many of the commands can be shortened, e.g. **LOOK** can be entered as just **L**, **NORTH** can be **N** and so on. This is useful to save typing repetitive commands such as movement commands.

The descriptions are not that detailed but are enough to provoke some thought and get you involved, which is the whole idea of adventure gaming - if they told you everything that was

going on there wouldn't be any point in playing, would there?

The adult humour is the best part of this game - **THE PRAWN** was funny but this takes it all one step further. When you stumble into the gents shower (drunk) during one part of the game, you hear a voice saying "Oh, I've dropped my soap - is there anyone around to pick it up for me?" I won't

spoil it for you by saying what happens next, but I'm sure you can guess!!

The game also responds to you by asking things like "What now Big Boy?" as a command prompt, which is a bit better than "I await your instructions" if you know what I mean. Playing **SQUADIES** reminded me of **THE PRAWN** a lot and I felt very relaxed playing it and found time flew by - it's

```

          FLATULENT SOFTWARE

Welcome to the Falklands. The evil Commanding
Officer has banished you to a life of shit.
Day after day you go to the movements clerk
to see if your flight ticket out has arrived.
Around the island, there are various items
to help you. It is said, that the movements
clerk is a bit of a player of the pink oboe.

GOOD LUCK and don't get too drunk.

PRESS ANY KEY TO START

```

```

South
WHAT NOW BIG BOY ?

N
You're in the Cookhouse.

All men look sick. A large Cockroach has
just crawled out of a meat pie.
The food on the hot plate has been standing
there for over 2 hrs and is now swimming
in fat.
Well done Egon roney.
EXIT E AND SE.
There is a A COCKROACH here.

WHAT NOW BIG BOY ?

```

very easy to get engrossed in an adventure game and this one is no exception.

However, I did manage to find one annoying bug. On loading the game I had Quill running in the background on my laptop so I could type this review and CTRL

and C to the game to check things as I needed to on the fly. However, in doing this I found that on starting SQUADIES, the machine switches CAPS LOCK on and if you try to switch it off, it won't work. The machine jams in

CAPS LOCK mode - only a reset will cure it. I have checked this on a Minerva QL, Aurora, a Toshiba 486 laptop and my own Acer Pentium laptop under QPC - all with the same results. Actually, as soon as the game is EXEC'd, the capslock light of machines with caps lock lights comes on and will not go out, no matter how many times you press it - even going back to basic will not cure it.

I found this annoying, although I doubt I'd had found it apart from the fact I wanted to do the review at the same time as the game. For most people this won't be a problem, as they'll be doing one or the other. I've played SQUADIES loads of times before in the past few years with no problems.

I think this will be the same on all QL systems, even native hardware, as well as emulators as I believe it to be a deliberate programming function by the author, to force people to enter their commands in all caps mode, as this must be the only method the interpreter understands. The system variable at 163976 normally contains the values 0 (for CAPS LOCK off) or -256 for CAPS LOCK on. Squadies seems

to change this to +256 which appears to confuse a QL. After leaving Squadies, I found I had to POKE_W 163976,0 to restore normal CAPS LOCK operation. Obviously, only if the system variables are at the original QL location!

```
WHAT NOW BIG BOY ?
```

```
E
```

```
You're now in the living accomadation
```

```
The Army colour scheme of Puke Green and Walnut Orange really sets the mood. From one room snoring can be heard. On investigating you find a very drunk Soldier lying on a bed with a empty bottle of beer in his hand. He has been sick and the cockroaches are eating it.
```

```
EXIT N,O,E AND NO.  
There is a A KNIFE here.
```

```
WHAT NOW BIG BOY ?
```

```
TAKE KNIFE
```

Another annoying feature is that the boot program pokes the device name from which the game is to run into address hex 280AB (decimal 164012). While the QL Technical manual says this is not used, it is in fact a pair of long word pointers

to the Toolkit 2 PROG_USE and DATA_USE defaults and nobbles these system variables, try PRINT PROGD\$ afterwards to see what I mean (save any work first!). Always assuming the system variables are at that location of course, which they probably won't be on a modern emulator or anything with a larger than usual screen. So you have to make sure your system is in QL compatible mode first and even then, be prepared to reset the machine afterwards because

of the CAPS LOCK problem.

Still, not to worry. SQUADIES is great fun, even if the humour is a little over the top at times. I enjoyed it a lot, from the grumpy pay officer complaining of his piles, to the drunken officer in the mess tent being sick - should bring the memories flooding back to any of you that have ever been in the army!

When grabbing items or whatever, be careful of the spelling - at one stage the phrase 'A PAKET OF CHIPS' crops up for example.

It's not that difficult to get to see a lot of the game too without getting killed or something equally awful happening to you. When you do get caught,

you can usually see it coming but just can't prevent the inevitable happening, which is a little different.

So, there you have it. Probably the best bit about SQUADIES is that it's almost free!! There is a 5 pounds shareware registration if you want any help.

Other than that, it

won't cost you penny, apart from a small copying charge for the disk and/or media. It is available from Ron Dunnett of Qubbesoft P/D on his disk PD8, along with several other programs on the same disk and will probably soon be available

from Phil Jordan's new library service too. If you've been lukewarm about the idea of buying and trying an adventure game up to now, maybe because of the cost involved (although most are quite cheap), then why not cut your teeth on this, it will cost you close to nothing and is well worth it - have fun!

Little hint, if you can't suss out the vocabulary it uses, or want to cheat to get some extra clues,

view the ADV_EXE file itself on the screen (e.g. load it into an editor). The text is not encoded in any way - you can see the words it understands embedded somewhere in the file! One word it understands is BONK, which gives you another clue as to the flavour of this game!

Next issue we'll look at another new area - our first graphical adventure review.

You and Your Programs - just good Friends?

Part 3 - System Compatibilities

Geoff Wicks

At the 1997 Byfleet Workshop my worst nightmare became a reality. I went to the show with a new version of one of my programs. On arrival I thrust the review copy into the hands of the QL Today editor. With an equal display of efficiency he immediately appointed a reviewer. Ten minutes later the reviewer announced, "It doesn't work on my machine!"

I had fallen foul of a compatibility problem between SMSQ and SMSQ/E.

QL users are alert to incompatibilities between the numerous QL ROMS and operating systems, but perhaps not to a more subtle form of system incompatibility.

Take monitors for example. In use within the QL community are a wide range of monitors from the CGA green screens to the latest SVGA. It would not surprise me to discover some people still using a TV set.

If you are writing software for other users, do not assume that their monitor works like yours. My first monitor, which gave many years of faithful service, gave a sharp contrast that made it unpleasant to work with white letters on a

black screen. Where possible I used green letters on a black background, a practice I had to unlearn when I started to write commercial software. On many monitors green letters are too faint to read easily, making white letters on a black background essential. Now many QL users have higher quality PC monitors, and want black letters on a white background, which is recommended from a health and safety viewpoint.

FRIENDLY SOFTWARE RULE: Where possible, allow users to configure their own screen colours.

If you allow users to configure screen colours or other program items, try to do this in a user friendly way. I prefer not to put screen colours into a configuration block, as the user has to remember the colours and cannot see the effect of any colour change immediately. It is much better to do this in the program itself.

Mice are another hardware complication. They are not yet an essential QL peripheral, but they are for PCs. QL users tend to be either lovers or haters of mice.

You should write programs that are easy for both users and non-users of mice. In practice most pointer QL programs do this adequately. Indeed PC software authors could learn much from the pointer implementation on the QL.

What are the essentials? Firstly make sure your pointer is visible whenever it is needed, and cannot be confused with the program's cursor. On most PC programs the input windows are small. The pointer is thin and I-shaped and the cursor a thicker vertical line. I find it easy to confuse the two, particularly when I am tired.

A pointer is what it says, a "pointer". The tip is a point, and only the tip has to be within the input window. On a PC the entire pointer has to be in the input window and this can obscure the text that is being inputted. Make your pointer a true "pointer" and make it large enough to be seen.

It is easy to lose pointers, even if you possess a couple of Jonathan Hudson's eyes, particularly now high resolution screens are common. Make sure your pointer is visible on all points of the screen. In practice this means a pointer should always have at least two colours. Think about your program's colours when designing your pointer. If you use the Easyptr suite, Easysprite contains a useful facility to examine your pointer on different coloured backgrounds.

FRIENDLY SOFTWARE RULE: Make sure your pointer is readily visible on all parts of the screen.

Now think about your own mouse use, particularly in one of the more complicated PC programs. Do you use the mouse all the time? Do you use key presses all the time? Or do you use a mixture? I suspect most of us do the last of these. Make sure your programs allow a mixture of both mouse and key press use.

Let's now take a look at one QL program, LineDesign. I have chosen this because it illustrates both good and bad points in mouse and pointer programming. Think about when you use a mouse and when key presses when you use this program.

LineDesign has a well designed screen layout. There is a large working area for the page, and the menus do not get in the way of this working area. At the top left hand side of the screen are the main commands. You can access these by either the mouse or a

key press. The key press is highlighted in red. Press one of these keys and a submenu appears. Again this can be accessed by either the mouse or a key press, and the key press

ses? They are in the manual but not on the screen. The first minus point for PROGS.

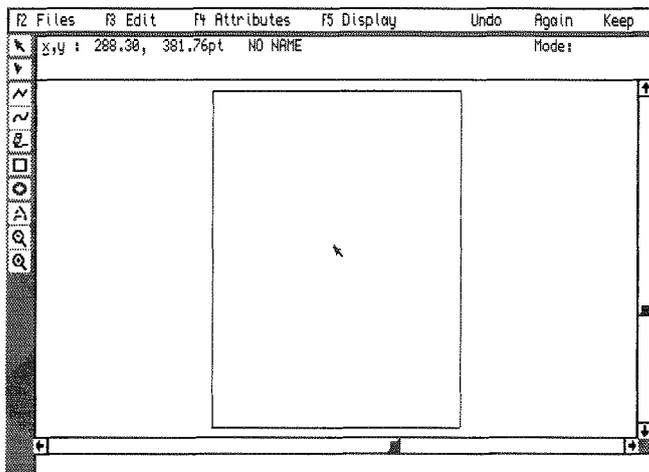
FRIENDLY SOFTWARE RULE: If you use icons in your program, make sure the purpose of the icon is clear.

On the top right hand side of the screen are three more commands, Undo, Again and Keep. These can be accessed by either the mouse or a key press, but which key? You would not guess they were ESC, F9 and + respectively.

In practice when I am using LineDesign I do not worry about using a mouse to access the icons, as the distances between the page and the icon are not great. I do, however, get irritated when using these three commands, because I cannot remember the key press, and have to move the pointer over a long distance to access them.

FRIENDLY SOFTWARE RULE: Always allow the user a displayed key press to avoid unnecessary long pointer movements.

Next time: Problems, not solutions!



is denoted by underlining. Available menu items are in black ink, unavailable ones in green. Full marks to PROGS so far.

On the left hand side of the screen there are 10 icons. These are compact and well designed. Even if you have only a simple knowledge of the program, it is clear what they do. Again full marks to PROGS. What is less clear is that all these icon commands can be accessed by a single key press. How many LineDesign users know these key pres-

QL Internetting

Dilwyn Jones

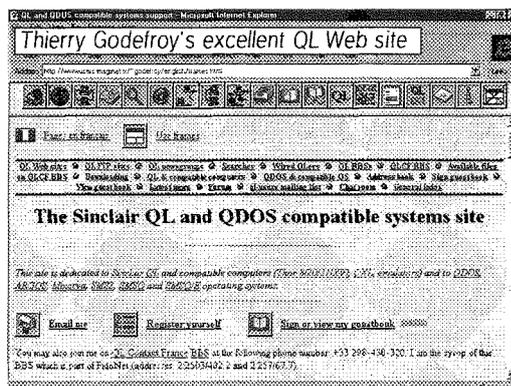
Using the various Search Engines available to Internet users, I have compiled a list of Internet/World Wide Web sites which contain Sinclair QL related material. I was pleasantly surprised by the amount of QL-related material available. I confess I had to use a PC to get hold of this material, but we can all dream of the day when we can surf from QDOS or SMSQ - happy surfing!

To get on the Internet using a PC you'll need to get the services of an ISP (Internet Service Provider). In general, you'll need a dial-up account to

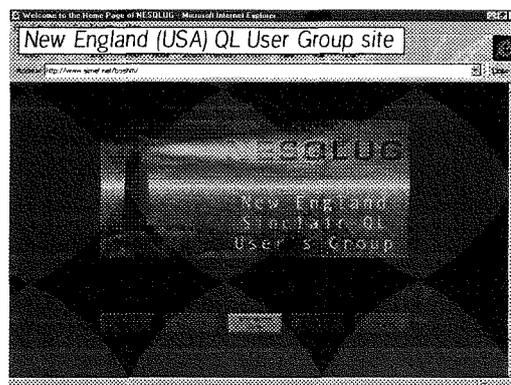
access the internet via a modem from home. These ISP companies will often give you free software or an automated program to set up your PC

ready to surf the Net - this is useful if like me you know little or nothing about PCs and wish to make the process as painless as possible.

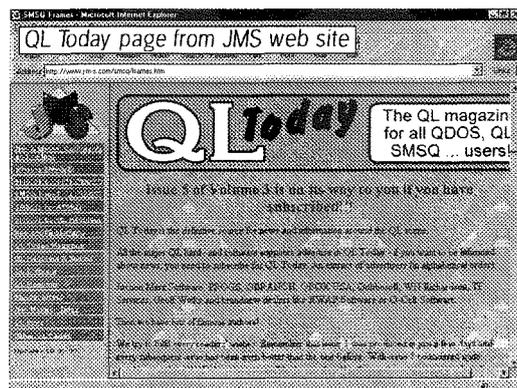
Examples of some free British ISPs are listed below, you can generally find their contact addresses or telephone numbers from their ad-



verts in the computer press. When I say 'free' ISPs, I mean you don't generally have to pay a monthly subscription for normal usage, just the cost of telephone calls (usually at local call rates) on their internet access numbers. When choosing an ISP, check if they have a telephone support line, how much that costs (typically about 50p per minute



SoftNet Free (Software Warehouse), TescoNet,



VirginNet, X-Stream
Some companies such as SoftNet provide either a 'free' service or a subscription based service. While you may pay around 5 or 10 pounds a month for this subscription service,

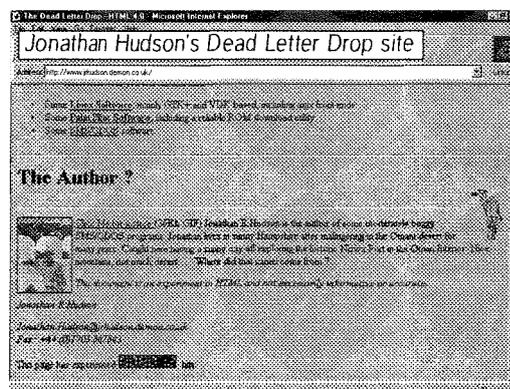


support when things go wrong and so on. Most ISPs will let you have your own email address (some will let you have more than one, up to 5 addresses (one for each of your family?) seems quite common, but you may have to change address if you switch to a different ISP. This leaves you with the problem of letting your friends and colleagues know your new email address, but that's probably no more of a problem than notifying them

in Britain with the free ISPs), are you likely to receive a lot of advertising in return for 'free' access, and in general, take the advice of friends already on the Net - a personal recommendation is as good as any other guide!

'Free' ISPs examples:
British Telecom ClickFree,
Freeserve (Dixons),
Cable & Wireless Lite,
FreeDotNet,
Gateway.net free,

you may get benefits such as less advertising, free or lower cost telephone



all of a change of telephone number!

After that introduction, here's the list of URLs or addresses of sites for you to visit. If anyone knows of any more QL-related Web sites, please let us have the Web address and we'll publish them for the benefit of all QLers.

<http://www.adski.demon.co.uk/computer.htm>

(Adders Lair)

<http://utopia.knoware.nl/stuurmn/sql.htm>

(Albert's Virtual Computer Museum)

<http://www.devili.iki.fi/pub/emulators/Sinclair/QL/>

(Ancient File library)

<http://www.arrgh.demon.co.uk/hardware/ql/index.html>

(Arrgh's Old Computers sites)

<http://www.arrgh.co.uk/hardware/ql/index.html>

(Arvid Borretzen's site in Norway)

<http://home.sol.no/~borretze/arvid.htm>

(Beginners Club, Italy)

<http://www.geocities.com/SiliconValley/Lab/5011/>

(Bill Richardson)

<http://www.info-point.co.uk/wnr/>

(Bruce Nicholls, of Quo Vadis Design)

<http://www.q-v-d.demon.co.uk/smsqe.html>

(Camelot old computers web site, Spanish)

<http://www.telcom.es/camelot/sql.htm>

(Chicago area Timex/Sinclair User Group)

<http://members.aol.com/clubbbs/catug/>

<http://dialspace.dial.pipex.com/town/square/chris/machines/intros/ql.htm>

(Chris Stratford)

<http://www.q40.de>

(Claus Graf Q40 site, Germany)

<http://members.aol.com/KuELWien/index.htm>
 (Club KuEL, Austria - German/French, includes details of QL-PD-CDR from Gerhard Plavec)

<http://www.geocities.com/SiliconValley/Vista/4807/>
 (Club QL International's Web site, includes some downloadable back issues of their newsletters)

<http://www.geocities.com/SiliconValley/heights/1296> (Daniele Terdina, Italy)

<http://www.itimpi.freemove.co.uk>
 (Dave Walker's home page, support for C68 and some of George Gwilt's software)

<http://www.sectorsoftware.demon.co.uk>
 (David Batty, Sector Software, a former QL software supplier, site still contains details of his QL software, some of which is still available)

<http://www.geocities.com/SiliconValley/Park/6533/davideeng.htm>
 (Davide Santachiara's English Web site)

<http://www.herrnsdorf.com/europro/linksmsq.html> (E.C.Herrnsdorf)

<http://www.ndirect.co.uk/~e.tedeschi/index.htm> (Enrico Tedeschi's Sinclair site, including QL)

<http://users.cybercity.dk/~dko3588/index.html>
 (Erling Jacobsen, Denmark, web site for Xchange etc)

<http://www.examina.net/eforenzi/personal.htm> (Eros Forenzi, Italy)

<http://www.novanet.it/qitaly/> (Eros Forenzi, Q-Italy site)

<http://romblon.dbs.informatik.uni-muenchen.de/~krojer/ql/> (Franz Krojer, Germany)

<http://perso.club-internet.fr/ggenty/qlfr.htm> (French QL page)

<http://members.tripod.com/~FWDComputing/> (FWD Computing site, USA)

<http://garbo.uwasa.fi/ql/pas.html> (Garbo archive in Finland)

<http://www.hophop.com/ql> (Giorgio Garabello's Italian QL page)

<http://www.geocities.com/SiliconValley/Park/4410/> (Hans Peter Recktenwald)

<http://www.home9999.demon.co.uk/ql.htm> (Jack Mitchell's QL site)

<http://people.a2000.nl/jbredenb/index.html> (Jan Bredenbeek's homepage)

<http://www.geocities.com/SiliconValley/Vista/9483/>
 (Jeremy Davis, describes himself as 'The Man From Microdrive')

<http://www.j-m-s.com/smsq.htm> (Jochen Merz Software)

<http://rand.thn.htu.se/> (Johan Klockars pages, Sweden)

http://members.tripod.com/hes_computing/hes1.html
 (John Rish, Home Electronics Service, USA)

<http://www.komkon.org/EMUL8/Macintosh/ql/index.html> (John Stiles, QL emulators on Macs)

<http://www.jrhudson.demon.co.uk>
 (Jonathan Hudson's Dead Letter Drop site, packed full of useful information and a lot of free downloadable software)

<http://www.ellis-online.co.uk/sinclair/ql.html> (Kev Ellis QL page)

<http://www.heydon.org/kevan/collection/manufacturer-sinclair/>
 (Kevan Heydon collectors site)

<http://www.dcs.port.ac.uk/~lesterc/> (Kit Lester's home page)

<http://pages.vossnet.de/manpet/ql.htm> (Manuel Petridis, Germany)

<http://www.compulink.co.uk/~digby/Mapej.html> (Mapej disk copying service, incl. QL)

<http://www.deuschle.de/qpc/index.html> (Marcel Kilgus, Germany, QPC support site)

<http://www.xs4all.nl/~wij2/ql.htm> (Marco Vacquier's page)

<http://pages.unisonfree.net/mswift/files/QZ/index.html>
 (Mark Swift pages - QDOS Classic and Q40)

<http://wuarchive.wustl.edu/pub/aminet/info/www/dirs/aminet/misc/emu/QDOS4amiga1.readme>
 (Mark Swift/Rainer Kowlik Amiga emulator)

<http://hem1.passagen.se/baslista/ql.html>

<http://www.jamt.net/speccy.html>

<http://www.cronsten.pp.se/ql.htm>
 (Michael Cronsten's QL Web sites in Sweden, includes loads of pictures of QLs)

http://www.atari_computer.de/mjaap/computer/sinclair_QL.htm (M Jaap site)

<http://www.sinclair-research.co.uk> (Need I say who?)

<http://www.airnet.net/boehm/> (NESQLUG site, USA)

<http://www.betechdata.no/thomas/ql/index.html> (Norwegian Sinclair QL homepage)

http://directory.mozilla.org/Computers/Operating_Systems/Sinclair/QL/
 (Open Directory - Computer Operating Systems)

<http://www.anit.es/pedro/>
 (Pedro Reina, Spain - some English and Spanish content, some software)

<http://www.pborman.freeseve.co.uk/>
 (Phil Borman's page. NB his previous Web site on www.pborman.demon.co.uk is no longer available)

<http://www.nvg.ntnu.no/sinclair/index2.htm> (Planet Sinclair, Norway)

<http://www.triathlon98.com/PROGS/> (PROGS Web site, Belgium)

<http://www.dur.ac.uk/~ded1brh/Q-Route/index.html> (Q-Route software web site)

<http://www.qbranch.demon.co.uk/> (QBranch site)

<http://www.emulation.net/ql/> (QemuLator etc)

http://www.mwn.net/infomac/app/q_emulator_lite_096.html (QemuLator site)

<http://web.inter.nl.net/hcc/A.Jaw.Venema> (QLay site, Jan Venema)

<http://www.home.swipnet.se/~w-14406/emu/sinclair.html> (QL, emulators, tools, etc)

<http://forums.bruin.net/cgi-bin/fbn/fbn.cgi/bruin.comp.sinclair.q1> (QL Forum on Bruin)

<http://www.hernsdorf.com/texts/qlintnet.txt> (QL on the internet article)

<http://www.geocities.com/SiliconValley/Bay/2602> (Richard Zidlicky, uQLx emulator etc)

<http://www.uni-mainz.de/~roklein/ql/> (Robert Klein, Germany - QL FAQ etc)

<http://www.di-ren.demon.co.uk/> (Robin Barker's Di-Ren Web site)

<http://rwap.webjump.com/> (RWAP Software)

<http://www.xs4all.nl/~ljb/sinclair.html> (SinQLair site, Netherlands)

<http://www.gm.fh-koeln.de/~it048/> (Stephan's Retrocomputing Site)

<http://www.gm.fh-koeln.de/~it048/emulator/ql/> (Stephan Suberkrub QL emulator site, Germany)

<http://www.firshman.demon.co.uk> (TF Services site, includes information about the new Q40)

<http://www.angelfire.com/il/dbaum> ("The Strange World Of Daniel Baum", Israel - in English.)

<http://wwwusers.imaginet.fr/~godefroy/english/frames.html>
 (Thierry Godefroy - this site is widely regarded as one of the best QL internet sites)

<http://www.uni-karlsruhe.de/~Thomas.Much/QL/> (Thomas Much web site, Germany)

<http://users.aol.com/clubbbs/tsnug/> (Timex/Sinclair North American User Groups)

<http://www.geocities.com/SiliconValley/Pines/5865/> (Timothy Swenson - site includes copies of previously printed articles, QL Hackers Journal and some software)

<http://members.aol.com/clubbbs/akahale.html> (ZXir QLive Alive! pages)

Some FTP And News Sites

<ftp://garbo.uwasa.fi/ql> (Garbo archives at University of Vaasa, Finland - Timo Salmi)

<ftp://wuarchive.wustl.edu/systems/sinclair> (Maya and Garbo mirror site)

<ftp://ftp.nvg.ntnu.no/pub/sinclair> (All sinclair computers)

<ftp://ftp.gui.uva.es/sinclair/ql> (Luna site)

<ftp://ftp.demon.co.uk/pub/qdos/> (Demon's FTP site)

<news://news.ext.jussieu.fr/comp.sys.sinclair> (Sinclair computers newsgroup)

<news://news.uni-stuttgart.de/maus.computer.ql.intl> (FidoNet/MausNet mirror of Intl.QL)

<news://news.uni-stuttgart.de/maus.computer.ql.c> (FidoNet/MausNet mirror of Sinclair.C)

<news://news.uni-stuttgart.de/maus.computer.ql.de> (MausNet mirror of computer.ql.de)

Letter-Box



QL SOFTWARE MILLENNIUM BUG?

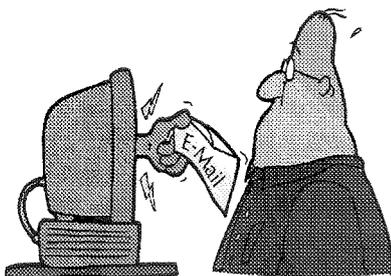
We have received a help request concerning the use of the Payroll and Cash Trader softwares which appear not to be year-2000 compliant, in the sense that they appear to reject attempts to specify post-1999 dates.

Does anyone know how to get around these problems, or

have a patch that can be applied to the programs - e.g. if the tests are of a form "if year > 1999 OR year < 1985 then reject" it may be possible to patch the test limits to work around these limitations.

If anyone can help Mr Smith with these problems, please contact him on

(+44) 0181-534 4916



QUANTA



Independent QL Users Group

Worldwide Membership is by subscription only, and offers the following benefits:

Monthly Newsletter - up to 40 pages

Massive Software Library - All Free !

Free Helpline and Workshops

Regional Sub-Groups. One near you?

Advice on Software and Hardware problems

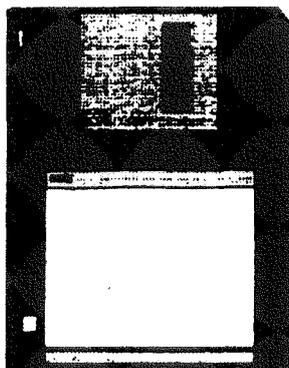
Subscription just £14 for UK members

Overseas subscription £17

Barclaycard: Visa: Access: Mastercard

*** Now in our SIXTEENTH successful year ***

Further details from the Membership Secretary



Bill Newell
213 Manor Road
Benfleet
Essex
SS7 4JD
Tel. (01268) 754407





Don H. Smith

writes: The flashing cursor on my JS QL

+ Trump Card is so faint I can scarcely see it. Is it possible in a short line or two to adjust the cursor brightness?

Reply: We asked for help on this via the QL Users Email Mailing List and got several replies.

The cursor brightness is set in hardware and cannot be changed on your system. The cursor colour on your machine is derived from EORing the background PAPER colour with binary 011 and "set in stone" unless, as Dave Westbury advises, you have a Minerva ROM, where the following command sets a white flashing cursor.

`POKE !124!51,71`

The value 71 is a binary number represented by `rrrrsccc` where the four high bits `rrrr` represent Rate, `s` represents Size and the lower 3 bits `ccc` represents the colour.

John R. Rish of Home Electronics Service in Texas USA advised checking the monitor's brightness and contrast settings - if set too dark, red against black would be hard to read.

Tony Firshman also suggested that users experiencing this problem who have an RGB colour monitor and some electronic knowledge could try adding series resistance in the DIN plug on the G-B (Green-Blue) lines, say 40 to 80 ohms. There should be some balance adjusters in the monitor, but this is not for the uninitiated.

For Gold Card users, back in Volume 2 Issue 9 of QL World, Bruno Coativy gave a function which found the cursor colour mask in the ROM area, which is in RAM in fact on a Gold Card, and poked in new values to

change the colour of the cursor in mode 4 or mode 8. Sadly, this only worked on early Gold Cards. Later ones

write protected this area to prevent the content being accidentally or deliberately overwritten.

Something missing?

If you read so far through QL Today, then you know that issues usually end with Byts of Wood. Mark Knight's article has not reached us yet. Which reminds me - if you found the layout of Mark's article in the last issue confusing, apologies - the next part will be differently formatted. The other missing bit is Jochen's Things article part 2 ... which has to wait for the next issue as well - it will be in there, promised.

BYTS OF WOOD
SAW POINTS OFFCUTS AND SNIPPETS

First a big thank you to the organisers of the two US shows at the end of May. The East coast show was hastily taken over after the sad death of Bob Gilder who originally doing the organizational honours. During that show Tony Firshman and I encountered one problem which may be set people who want to build new Aurora or Q 40 systems into tower cases. Many of the cases available at the moment use the ATX configuration and, whilst the board fits into the case there are several problems you will come up against if you decide to use one of these.

The first is the position of the keyboard outlet. The Q 40 was designed to fit into an AT case and in one of these cases the keyboard socket lines up nicely with the hole in the case. On an ATX board the position of the outlet is different and the hole is designed for PS/2 plug (mini-DIN) so this makes things harder.

An even more serious problem is the power supply itself. The concept behind the ATX motherboard is that the PC can be activated by a software event such as an incoming fax signal. The sockets for the power are different to the usual P8, P9 sockets found in AT cases and have extra connections for a switch on the motherboard which is used to activate the power supply from a standby mode. Needless to say this does not work very well on either the Q 40 or the Aurora. The QPlane is also set up for the standard AT plugs so that won't accept the ATX plug and, although the Q 40 and Mplane both use the standard hard drive plug the power supply cannot be turned on unless the relay is tripped.

If anyone has the relevant information about the wiring of the ATX switch could they please let us know so we can publish it. AT cases are becoming rarer so we need to know how to use an ATX power supply.

DIY MIDI

Simon Goodwin put in a welcome appearance at the two shows demonstrating a natty piece of software that he wrote for the East Coast Group. This uses the QL network as a MIDI interface and allows you to play multi-voiced tunes on a synthesiser connected to your QL.

The package includes a text file which explains how to wire the cable and bears all the usual hallmarks of the Simon's innovative software. The software is available via NESQLUG at the moment because they sponsored Simon's work and his air fares.

It is always good to see people like Simon re-appear after a long absence from the QL scene. At one point he was one of the most active members of this community and certainly provided many people with their first introduction to programming with his DIY Toolkit series in the, now defunct, QL World magazine. Maybe, with a little support and encouragement from the rest of us, we can tempt him back into doing a lot more QL programming.

All This and QPC II

Marcel Kilgus made his first US trip with us this time and seemed overjoyed to find out that my laptop behaved exactly the same way that Jochen's Desktop PC did when QPC II tried to read its floppy disk drive. Marcel's eyes lit up at this and he spent a good part of the first show monopolising my machine while he tried to find out what was actually happening.

I am pleased to say that he solved the problem (clever little sod!) and I can now copy to and from the floppy drive with no problem. The version that was sold at the US is still not fully operational. The printer

port and the serial ports are not working 100% but it is now very close and maybe this issue of the magazine will herald the final release version.

It's Not All Roses

On the whole the U.S. trip was pretty enjoyable although there were one or two things which were not quite as good as they might have been. I put a message up on the Newsgroup on the Internet asking people to place specific orders so I could be sure to bring the things they wanted. What do you think they asked for the most? Rich Mellor's SBASIC/SuperBasic Reference Manual - the heaviest thing they could order!

Of course this was not the biggest problem that we faced. We were trying to be very cost conscious on this trip but we wound up spending our first few nights in the 'Motel from Hell'. This was the kind of place where even the cockroaches wore gas masks and the other 'human' occupants were even less savoury. I leave this to your imagination but I was certainly glad to be heading off to California. Glad, that is, until we attempted to get on the flight. Although we confirmed the flight by telephone Tower Air failed to mention that it was running 6 hours late. The plane was old, dirty and the toilet failed to function - not bad for a six hour flight. On the way over we flew above the thunderstorm which downed the flight in Little Rock. This was very exciting and pretty from above but disastrous from below.

QL 2000

At the end of the East Coast show the organisers held a discussion about all things QL. One of the items on the board was about where to hold a show next year and many of

the people opted for a visit to the UK. While I am not willing to give up my annual trip to the US I am very keen on the idea of having a big international show next year. Pushing all the arguments about whether the millennium starts next year or the year after I really do think it is time that we had a big weekend get together and invited QL users world wide to attend.

I have already discussed this with QUANTA since they should be the ultimate hosts and they are generally in favour of the idea so now we need to get it off the ground. It would need to be in the spring, I think, because the overseas visitors would also like to get a bit of sightseeing in and I think it should be just before the air fares go up for the summer. Now all we need is the place....

It's not Cricket

Just when you think that you have something sewn up life throws you a googly.

I recently acquired a new monitor for my original QL. For a while it had been running on a Microvitec Cub which was OK but had an occasional fit producing some very odd buzzing and popping noises together with a flashing screen. This is not only annoying but can be lethal to the 8301 chip so I was very pleased to be offered a new RGB monitor. This QL sits on a desk in my office and has a standard Gold Card and a couple of Miracle DD drives plugged into it. It spends most of its time formatting DD disks but I do also use it to test programs and Super Gold/Gold Cards that get returned as faulty.

Since this was a monitor type which I had never seen before I had no idea of the pin-outs at the rear so I turned to Keith

Mitchell who is a repository of knowledge on these things and he made a new cable for me to use. The new monitor was crisp and very good to use so I was quite happy with it. Then...

I got a Super Gold Card returned to me which was only getting part of the way through its startup screen. This fault is usually due to faulty ram chips but I thought that I would plug it in and test it out. It didn't work at all. I still have a few new boards which are minus the 1810 chip so I took out the 1810 from the faulty board and plugged it into the new one - Nothing. I tried a SGC which I knew was working - Nothing. At this point I suspected the cables. Maybe I had pulled a wire loose from one of the connecting cables. I plugged the Gold Card back in - that worked.

OK maybe it is the QL. I tried another one. Same results.

This was all getting to be very frustrating and I began to suspect that I had seriously trashed some part of the system so I plugged the Gold Card back in. Now it worked again. I sat down with a cup of tea and pondered the problem. The only difference between this system and the one that I had used to test Super Gold Cards before was the monitor but it can't be that - can it?

A quick phone call to Keith revealed the answer and here it is.

The Super Gold Card uses the QL Composite Sync signal at B13 on the expansion connector to help generate its memory refresh signal. There is no buffering on the QL between the monitor output and the expansion connector and this means that some monitors which have a low impedance Sync input will pull the signal

low enough to stop the Super Gold Card from working.

This is not a problem with the Aurora because the expansion connector signal is not related to the video monitor outputs. The standard Gold Card generates its memory refresh in a different way to the Super Gold Card so that works Ok too. All in all an interesting, if frustrating, problem.

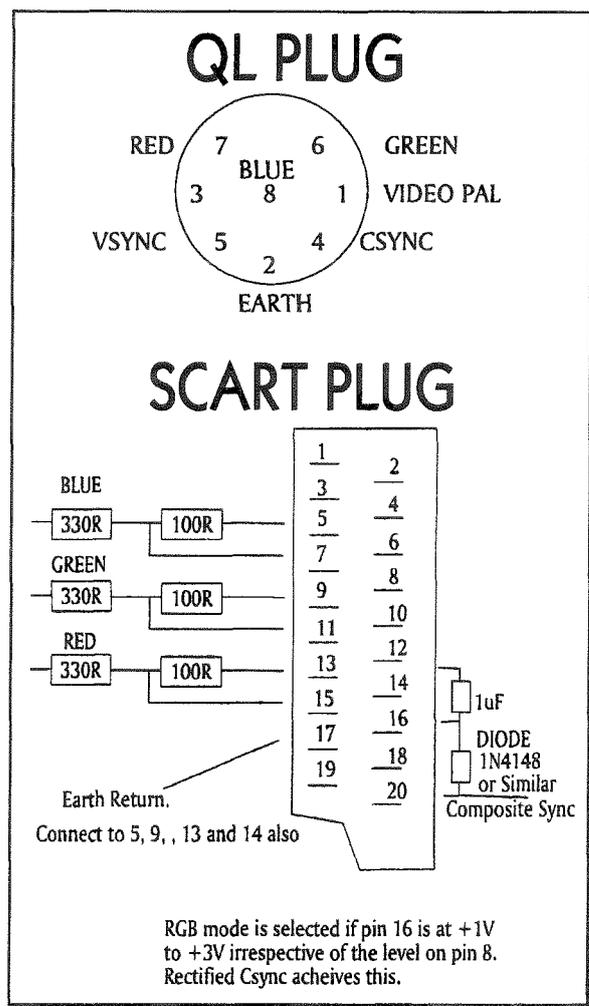
I'm Not Scart

Another little teaser that recently crossed our threshold was how to connect a scart plug to a QL monitor lead. My first real QL monitor was a Phillips CM 8533. (I did have a few awful ones before that including an IBM CGA monitor which was OK if a bit hazy)

This was a very good monitor with a clean crisp display and I still have it in the shop to run up a standard system if I need it. It also have a Scart Connector on the back and I used a cable supplied by Ron Dunnott of Qubbesoft.

Scart, for those of you who do not know about it, was an attempt at a standard TV and video connector which could carry sound and actually be used to switch on the TV if the Video is switch on. It also has a signal line which can be used to select RGB on the display device if it is wired to detect it.

Keith Mitchell has looked into this and produced the diagram here to allow you to wire a cable for yourself if you want. We don't guarantee that it will work with all devices with a scart input but recent years have seen the standard settle down. Most modern TVs with a scart input plug can be triggered into RGB mode but we do not have details on all of them.



Its Not Just Words

Geoff Wicks is very active at the moment and I have just received a very interesting Beta test program from him. It takes a piece of text from either Quill, Perfection or Text 87 and converts it into Rich Text Format for use with a PC word processor. I have been looking at this piece of software with great interest because I recently met some-

one who had written several short books using Quill and needed to send them to the publisher in a PC format. I suspect there are others of you out there with similar needs so this new product will be eagerly awaited. There is no release date for this so don't pester Geoff for a copy just yet though the version I have been looking at is already very far advanced.

Bye Bye BBS

Just as I write a bit in this column praising the BBS system and exhorting you all to use it I learn that Phil Borman has closed his Nene Valley BBS down. Phil is devoting more of his time to his family now and is, as such, not going to be as active in the QL scene as he once was. This is a shame because he was one of the guiding lights behind the software side of the Qubide and certainly wrote some very interesting and useful utilities for users. Apart from this he provided PBox, the software that runs the QL BBS system. His web site is still up and running (see Dilwyn's list in this issue) and there are still four other functioning QL BBS's to access:

QBBS run by Tony Firshman

+44 (0)1442 828255

QBOX run by Jochen Merz

+49 (0)203 502013 or 502014

QLCF run by Thierry Godefroy

+33 (0)498 430320

QBOX-USA

+1 810 254 9878

Don't forget these can be accessed via QTPI and a modem on a standard QL (with SuperHermes is best to get the high speed serial and discrete mouse channels). They can also be accessed equally easily on a PC running a terminal program.

I think I'll write an article about how good Windows is now -

maybe I can get them to close down too.

A Colourful Paris in the Autumn (perhaps)

A couple of people have reported problems with the Q 40 to me and while I visited Jochen recently I found out the reason. One of the problems concerned the size of the screen with the Q 40. In the SMSQ/E version this is limited to 512 x 256 even though there is a configuration item in the program which suggests that higher resolutions are available. The other problem is odder and relates to the SBASIC. George Gwilt found that, although you can start a new SBASIC job off in the normal way you cannot use 'CTRL C' to jump from that program to another. He later discovered, when issuing an 'OUTLINE' command in one of these BASICs to enable the pointer environment, that the 'CTRL C' function was restored.

These are puzzling circumstances and strangely enough both this problem and the lack of higher screen resolutions have the same root. The colour drivers for the Q 40 already exist in skeletal alpha test format and when Tony released the Q 40 O/S he removed them and inserted a modified standard QL display as a standby until they are finished. The version that he used for this will only allow you to use the 'CTRL C' switch if the SBASIC window you create is at least one row or one column of pixels short of full sized (ie. 511 x 256 or 512 x 255). This, says Jochen, 'is just the theory' and, since I am here in Duisburg with my laptop and not my Q 40 I will test it when I get back. Any changes to this report may or may not make it onto the page.

Thierry Godefroy (it's that man again!) announced recently that Tony Tebby will attend the Paris

show with high colour driver for the Q 40! 'I love Paris in the Autumn when it's colourful....'

While I am mentioning the Q 40 and, since I got the chance to read through the proto-QL Today in Jochen's office I noticed a couple of things in Bill Waugh's article on the machine which need mentioning. The two serial ports are not fixed as SER1 and SER2. The plate which holds the sockets for the ports is connected to the main I/O card with two separate ribbon cables - one for each port. These both terminate in exactly the same 10 pin IDC plug so you can choose which port goes with which socket. The reason Tony suggests that you choose the highest port number for the mouse is that it searches from SER4 back to SER1 for a mouse. It makes the startup faster if it finds the mouse right at the start and then carries on with the rest of its work.

Endspeace

Also being able to read through this very issue enables a quick reply to two of David Denham's comments in his piece on his boot file and use of Qascade.

If you want to get FileInfo II to act from a Qascade menu use this line:

```
FI2;Maillist;Win1_maillist_ddf  
modified for your own filenames  
of course.
```

Also you will find a little program called Mclock in the Qascade archive. If you execute this you will get a neat little button with a clock and the free memory displayed. You can assign two programs to this button by using the environment variables (one for each mouse click, left or right) so I have chosen to assign the left click to the calendar thus:

```
740 SETENV "MCLICK_1=win1_calendar"
```

Very useful this.





The QL Show Agenda



International QL Meeting - (NL) Eindhoven

Saturday, 4th of September 1999!

Held at its usual Venue: St. Joris College.

The meeting starts at 10am and ends at 4pm.

All major QL dealers will be there!

QL Show - (F) Paris

Saturday, 18th of September

The QLCF international meeting will take place in Paris on 18th September 1999. The venue: Ecole Supérieure d'Informatique, 23 rue du Château Landon (near Gare du Nord - North Station), Paris Xème. Tel. 01 53 35 97 00.

The meeting will start at 10:00 and will end at 18:00. Tony Tebby will be there with the new Q40 colour driver (so he told us)...

All major QL dealers will be there!

Other software authors are expected as well, Wolfgang Lenerz, Albin Hessler etc.

Quanta workshop - (GB) Byfleet

Sun., 3rd of October 1999

Same venue as every year: The Byfleet Village Hall. The meeting will start at 10am and will end at 5pm. **Pick up the next issue of QL Today there!!!**

QL Meeting - (A) Heidenreichstein

Sat./Sun., 9./10.th of October 1999!

Same venue as last time: Gasthof Nöbauer.

Definitely a very nice, social event too!

Austrian meetings are always more than "just" a QL meeting. This time, a visit to a narrow gauge railway and a model train exhibition is planned. Please contact us for more details!