

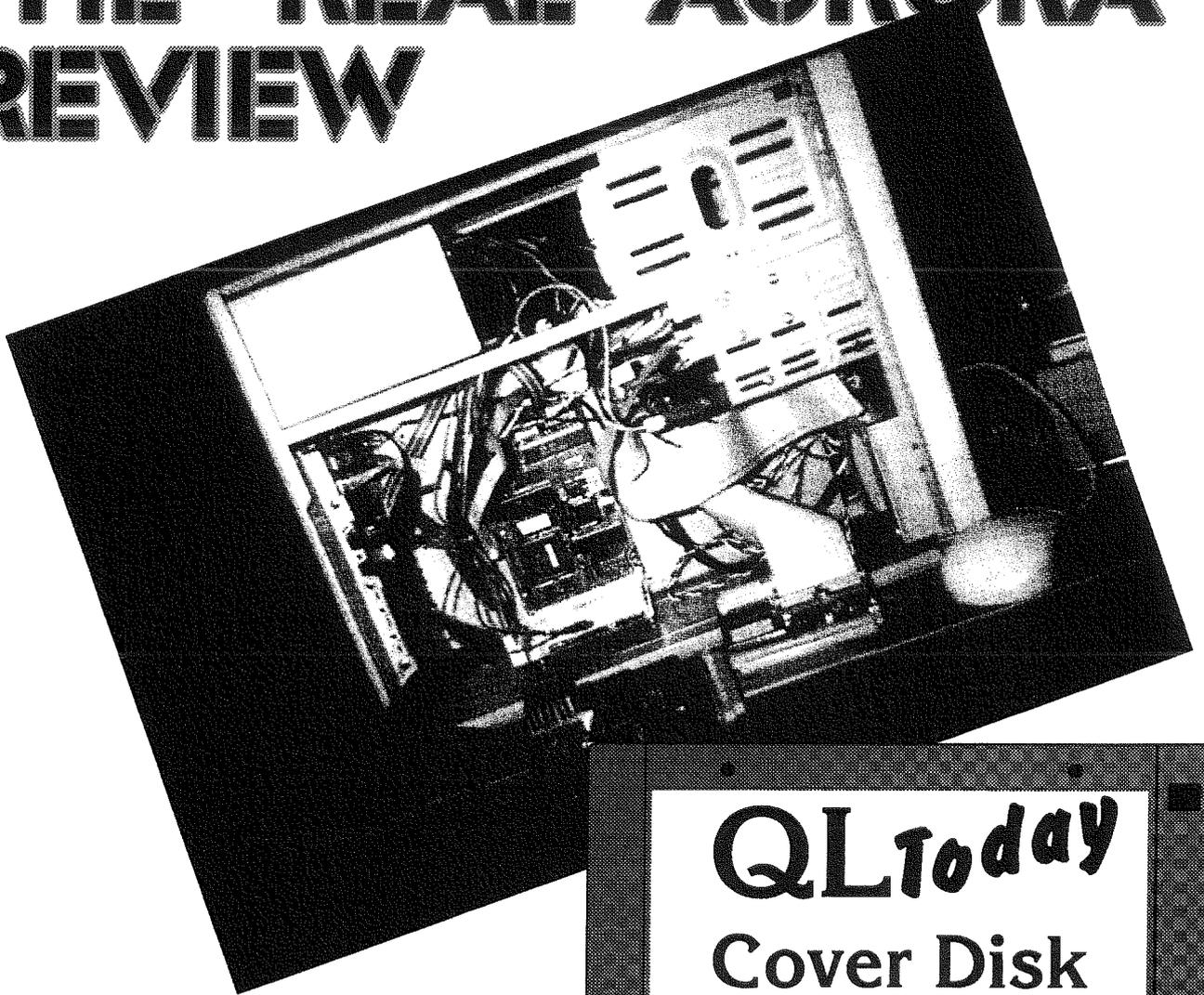
QL Today

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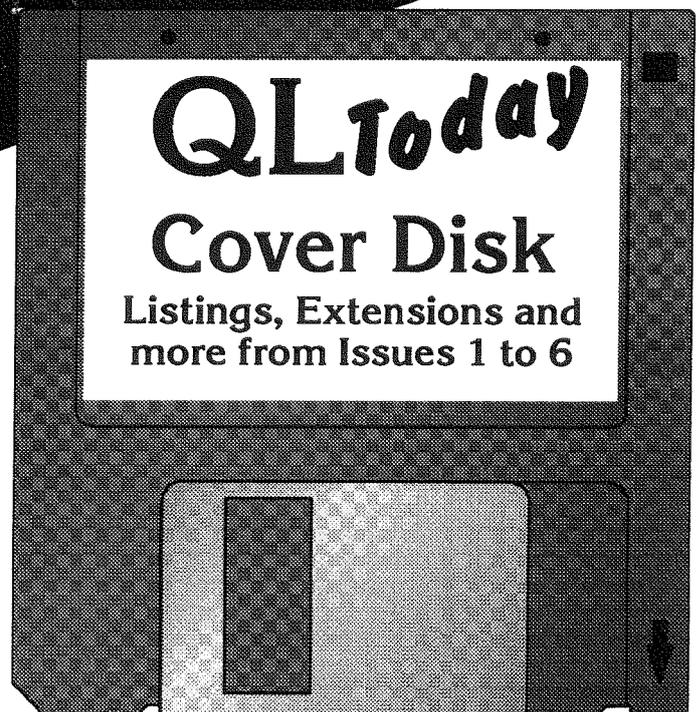
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The Magazine about QL, QDOS,
Sinclair Computers, SMSQ...

THE "REAL" AURORA REVIEW



FIRST COVER DISC
INCLUDING ALL THE LISTINGS,
PROGRAMS, EXTENSIONS OF
ALL ISSUES PLUS MANY OTHER
"GOODIES".



QL Today

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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) in 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.

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Issue 1: 15 April	Issue 2: 15 June
Issue 3: 15 August	Issue 4: 15 October
Issue 5: 15 December	Issue 6: 15 February

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Editorial

Dilwyn Jones

With this issue, QL Today takes a bold step and presents our first cover disk for our readers, containing a mixture of programs, listings and text files. We hope you will enjoy going through it. Try the hilarious Qeyes, reformat your disks rapidly with QFormat, or try out the listings from this and previous issues if you haven't typed them in already. There is also a complete index to all six issues of the magazine so far. Anyone wishing to obtain copies of previous issues should contact QBranch (in England) or Jochen Merz Software (in Germany) to ask for availability and prices. See page 55 for more details of the cover disk.

The Aurora is now well and truly out, and it was obvious at a recent Quanta workshop that quite a few have been sold, and that it has received quite a good reception. Ron Dunnett of Qubbesoft P/D says he can only just keep up with the workload its sales have caused, which must be good news both for him and the QL community in general. Hopefully, Aurora users will soon have access to the extended colour mode drivers currently under development.

The Hove Quanta workshop held in February was very well attended, and all present seemed to have had a good time. There is a lot happening on the QL scene at the moment, and new products such as Aurora and QPC seem to have been well received and to have stirred up a lot of interest and discussion among QL users, which can only be a good thing. The PD software scene is also active, with great software coming from all directions. The Web Browser I mentioned in my Christmas wish list looks like becoming reality thanks to the work of Dave Walker, who is attempting to port a publicly available Web browser source to the QL. And on the commercial software front, PROGS are producing Prowess based applications, including hopefully a new version of Line Design. Quo Vadis Design is working on a top-secret set of utilities based around diaries, dates and databases, using Jonathan Hudson's CSM (Client Server Manager), while QBranch are in the early stages of a RouteFinder type application.

I have watched some apparent unrest in Quanta with unease lately. The editor is clearly not happy with his lot and may not be standing as editor for the next year. I hope that this is only a temporary matter, that things will improve after their AGM in April. I was tempted to run a cartoon depicting the editor bound and gagged to a chair following the gagging order allegations, but I decided I'd better not risk inflaming matters. The present editor has done a lot to improve the appearance and content

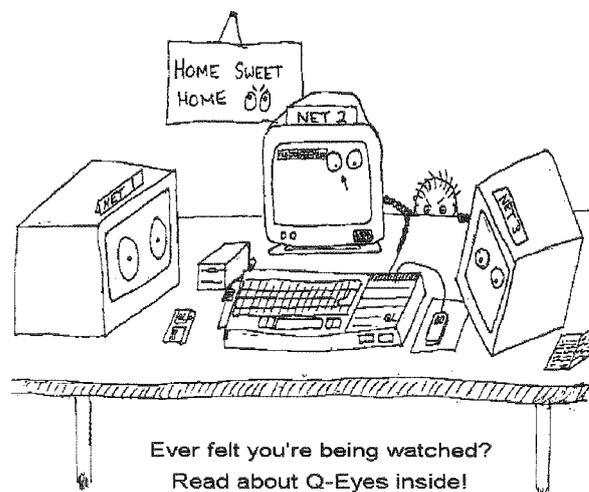
of Quanta's monthly newsletter, so those of us who are members owe him a debt of gratitude for his hard work with the newsletter.

Later this year, Club QL International will release their 100th monthly disk based newsletter. We have given a lot of publicity to Club QL, because it is a small, non-profit making organisation (headed by the genial Mike Kenneally). Long may it continue. Equally, Tim Swenson's Hacker's Journal has been around for quite a while, and is also produced on a non-profit basis. We are very lucky on the QL scene to have individuals so devoted to such unpaid work.

Steve Johnson is back! Having originally decided to close down the PD software library (previously known as S.J.P.D.) because of his bad health (Steve has suffered from back trouble for some time now and found it difficult of late to sit at a computer for long) as reported last month, Steve was revitalised by all the messages of support and encouragement he received, and has decided that his PD library service will continue, although the slipped disk in his back may slightly restrict his activities until his back improves after the surgery he will have to undergo. We wish him well.

We would like to extend our sympathy to the family of Ed Bruley of Care Electronics, who died recently. Care Electronics were among the early QL traders. Although not actively advertising their QL software recently, they still acted as dealer for the Tony Tebby applications and Zitasoft programs. With Ed's death, the company's QL software production will now cease and Jochen Merz Software will take over distribution of the Tebby programs.

Finally, you may have noticed that the magazine has slightly fewer pages this month, because of the cover disk. We tried to keep postage costs down by slightly reducing the number of pages to compensate for the weight of the floppy disk. We hope you'll enjoy it, and please let us know if you would like us to do more cover disks from time to time in the future.



S.J.P.D. News!

Despite the closure of SJPD announced in issue 5 of QL Today, it seems that things may not be that simple after all! You may have noticed that in SJPD's advert Steve Johnson stated "With Luck One Day I MAY Return". I expressed some sadness in issue 5, since I felt that the loss of one of the largest sources of QL software was something we could do without.

Well, Steve is suffering from acute back pain and is awaiting further surgery on his back. This is causing him discomfort as he tries to sit at a computer for example. I fully understood that Steve needed to reduce his computing time to spare his back. However, since then, things have moved on a little.

Since the original closure announcement, Steve has received so many messages of support and expressions of sadness at the closure of SJPD, that he has decided to reconsider the closure, especially now that he is in a more positive mood about his medical condition, so SJPD will still exist. The only change will be that due to the closure of the original accounts, payments should now be made to him personally (S. Johnson) and not to SJPD any longer. Also, Steve can no longer accept Eurocheques. Steve advises that all customers should return their SJPD catalogue disks to be updated to the new Steve Johnson version. In time, Steve will also remove all references to SJPD from his disks.

Steve also asks: "Will all authors of software please continue to send new and updated versions of their software so that I can keep the library up to date." This obviously indicates quite a degree of commitment to the PD library service by Steve Johnson.

Software Releases

Recent releases from SJPD include the disk SJPD68, which includes a freeware utility for storing birthdays, a "thing" for control of QPC colour palettes, a profiler for C68, and version 3 of the Signal device driver for QDOS and SMSQ. It also contains ACPzits for pointer driven selection of files to unzip. SJPD69 contains a list of QL users email addresses, a couple of demo programs, Zx81 mag #2, a pointer driven print spooler and a collection of HyperHelp files for the SuperBASIC interface to the Data Design engine. SJPD70 contains a QSpread v1.33 demo, ACP v3.0, a lottery syndicate checker, Exorcist (front end for Ghostscript) and a couple of programs for

displaying RAM and directory information by George Gwilt. SJS177, on 3 HD disks only, contains a set of zip files containing various language wordlists, which you can use to feed into a spell checker or to write your own word games, for example. In the classic books and literature section, new additions include CB157, which is a text file guide to HTML, potentially useful for Web users, and CB158 contains a copy of 'Emulate issue 6', while CB159 is The Complete Angler by Izaak Walton.

QL THESAURUS V3.50

Version 3.50 of QL-THESAURUS has now been published by Just Words. The program no longer requires the Turbo Toolkit, although Toolkit 2 should be active.

The default directory can no longer be set by the DATA_USE command, but instead the program can be configured using the QJump configuration program. The default directory can also be passed to the program by a parameter in an EX, EW or EXEP command.

STYLE-CHECK goes Dutch

A version of STYLE-CHECK for the Dutch language has now been published. STYLE-CHECK NEDERLANDS contains similar features to the English language version. Details can be found in the advertisement elsewhere in this issue of QL TODAY.

JUST WORDS! have also published a HD public domain disk for Dutch language users. This contains the SUGGEST spellchecker (requires QTYP environment) with a Dutch rule file installed, dictionaries for QTYP and SPELLCHECKER conforming to the new Dutch spelling and a demonstration version of STYLE-CHECK NE

The QL Hacker's Journal has moved

Tim Swenson, editor of the QHJ, has moved back to the SF Bay Area. His new address is:

38725 Lexington St. #230

Fremont, CA 94536

USA

Tim has just put out an issue of the QHJ and it is available on his web page (which has also moved):

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

Pines/5865

swensont@geocities.com

Tim sums up the last few months like this: Left the Air Force, Moved to CA, Got a New Job, Moved into an Apartment, Most Stuff in Storage (including some QL stuff), Waiting to Sell House in Ohio (any takers?).

Tim is still doing QHJ Freeware, a freeware distribution service for North American QL and

Z88 users. Tim no longer has his ED drives (went into storage), but he can handle HD and DD. See the QHJ web page for a list of freeware available.

Tim says that he is also spending some time tinkering with his other hobby, Wargames. On his web page are a few free wargames designs. If you also share an interest in Wargames, please check out the games on this web page.

Tim hopes to buy a house in CA in the next few months (dependent upon his Ohio house selling) and get his stuff out of storage. Then he will have his full QL and be back up to speed.

PROGS News

PROGS have now got a home page which is used for ProWesS support. All the ProWesS programming info can now be read on-line. It can all be found at: <http://www.club.innet.be/~year2827/>
Font Utils Package

The new fontutils package contains three programs, all intended to make the manipulation of your font collection easier. The first program is a new and improved version of what used to be the "pfb2pff" package (there are free updates for owners of that package). This program converts Adobe Type 1 fonts to PROforma fonts. It can now handle both the .pfb and the .pfa variants. The program can also convert Ghostscript fonts. If a file with kerning information is available, that info is added in. This program now has a proper user interface (you can indicate in a menu which fonts you want to convert, and you can convert lots of fonts in one go). The second program on the disk allows you to quickly preview the fonts which are available in PROforma. You get a list of fonts in a menu. When you indicate one of the fonts, a simple text is displayed in the window in that font. You can determine the text which has to be displayed, and by resizing the window, you can also change the size. The third package is a new and improved incarnation of the "showfonts" program which was part of the old PROforma. This new variant is also menu driven, and allows you to display all the letters in the font with their name. You can choose between displaying this on screen or on the printer. The program now properly makes sure that the names or the glyphs of the letters never overlap (and remain readable). Of course, you need ProWesS to use the fontutils package. The retail price is BEF 1200 (about 21 pounds) excluding postage (thanks to Belgian post, postage rates have had to go up).

ProWesS News

As usual there is also a lot of evolution in the ProWesS package. There is now a new feature to make sure that fonts are pre-calculated. They are

stored in some memory outside of the cache, and so when a font is precalculated at a certain size, the letters are always immediately available. Also, a precalculated font is automatically resident, so the font is available in all programs without explicit loading. There has also been some important evolution in the ProWesS types (thanks to Wolfgang Lenerz). The menu type is now more powerful, and allows indicating several items by dragging. The loose item and label types now allow the selection keystroke to be underlined. Another very important change in the types (also needs the new OVME driver) results in the borders around the current item to be drawn much faster than before. This makes pointer movements in ProWesS much smoother, and gives a better (proper) feel to the system.

LineDesign - A new Version?

Although this may be a bit premature (as it will depend on Joachim's workload) PROGS hope to be able to finish the new version of LINEdesign at about the time when QL Today will appear. This new version will contain some bug fixes and will also remove some problems which existed in the old version. The new version will need ProWesS to function. However, no new functionality will be included yet (this will take more time). Updates will be free, and the price for the package will be lower.

ProWesS FAQs

Joachim Van der Auwera is in the process of compiling a list of Prowess FAQs (Frequently Asked Questions), and asks that anyone who has some interesting questions about Prowess which ought to be in this compilation let him know.

News from Jonathan Hudson

Ghostscript 3.33

The most recent public version of Ghostscript (freeware Postscript (tm) interpreter) is now available for SMS/QDOS.

gs 3.33 offers many improvements over 2.6.2:

- Vastly improved font quality
- Supports Adobe Acrobat (.pdf) files
- Stylus support for 720dpi and colour
- Many new devices and format conversions (eg ps to Adobe Illustrator)
- Plus your old favourites ...

gs 3.33 must be one of the largest SMS/QDOS programs ever, the program binary is 680 Kb. The minimum usable hardware is 4Mb RAM plus hard disk. I'm delighted to report that the latest version of c68 performed admirably in compiling a program of this complexity, with very few patches required.

ghostscript 3.33 may be obtained from



<http://www.jrhudson.demon.co.uk>, archives are available for the SMS/QDOS binary and SMS/QDOS patches to the GNU source code. This site also has links to the GNU ftp site (prep.ai.mit.edu/pub/gnu or mirrors) for the GNU font files and full source code.

In order to benefit from the improved font rendering, I recommend that the latest GNU fonts are used.

QTPI 1.62.4

A minor update to the (popular?) communications program is available only from <http://www.jrhudson.demon.co.uk>.

1. The cursor may be configured as either the old QTPI 'solid' cursor (coexisting with mouse pointer) or a single QD style 'mouse cursor'. The 'mouse cursor' may be defined as either a (flashing) 'block' or 'underline' in red, green or white.

It is possible that the SMSQ/E amazing 'disappearing solid cursor' is fixed.

2. When used as a PBOX console, QTPI will admit to being ANSI or VT100 compatible.

QL/SMSQ Mailing List

Quo Vadis Design has set up a new free QL/SMSQ email mailing list for anyone with access to internet email. An email mailing list is made up of people who have a common interest, it works by receiving an email from one of the subscribers to the list and then it send the email to all the other people subscribed on the list. The list is available 24 hours and when a message is sent to the list it gets distributed to all the subscribers within 15 minutes. The list is for the general discussion of all things related to the QL/QDOS such as problems, software/hardware releases, help wanted etc.

If you wish to be on the list send a message to majordomo@nvg.ntnu.no with **subscribe ql-users** in the message body. Your request will be acknowledged and you will receive any emails immediately after this. Unsubscribe information will be given when you join the list.

Bruce Nicholls

Probert Encyclopaedia Update

The Probert Encyclopaedia reviewed in issue 5 of QL Today has been updated, and now runs to four disks rather than the three in the review version. New sections have been added, including ones on computer viruses and animal anatomy.

Contact Steve Johnson for further details, and how to upgrade.

Floating Point Accelerators

Simon N. Goodwin informed us about news on the FPU side: Qdos and SMS have been extended to take advantage of a hardware floating point unit, making floating point calculations much faster. There will be a detailed article about this with examples and test timings next month.

C68 from version 4.22 supports the FPU. You need the FPSAVE extension and the FPSP (Floating Point Support Package) for your FPU - 68881, 68882, 68040 and 68060 are all supported. The same goes for S(uper)BASIC, but you also need the FPUfns - a small file of extensions that use the FPU.

The FPUFns are replacements for the BASIC transcendental functions. These use 20 digit IEEE extended precision internally, but still run several times faster than software floating point routines - over 30 times faster in some cases.

The FPSP automatically detects which tasks are using the FPU and does not need to intervene for the majority, which do not use it.

The FPSP is freely available, in versions for 68881 and 68882 FPUs with either 68020 or 68030 main processors (only the FPU is relevant) and much larger versions for 68040 and 68060. The 040 version is much the biggest, at almost 50K, but it does include quite a lot of routines that are not generally available in BASIC, such as hyperbolic functions and optimised logarithms for various bases. The FPSP interface for programmers is the same regardless of FPU - you just put the operands on the A7 stack and call a subroutine from a table at the start of the FPSP, which leaves the result in FP0.

You'll need GWASS if you want to re-assemble any of the FPU code, which is written in 68020 assembly language, and you also need George Gwilt's FPSAVE utility to allow tasks to share the FPU safely. All these programs are available, with source, for free, but you'll need to buy your own FPU. Recent adverts in Amiga magazines offer 33 MHz 68882s for just a tenner, so the cost is not prohibitive if you've got the socket for it already. In the case of the 68040 and 68060 the full version of the chip fits the same socket as the EC version with no FPU, so you'll end up with a spare 'EC' chip after making the substitution. You should still be very careful not to bend any of the 200 or so pins in the course of swapping the parts; it might be worth buying a 'PGA chip puller' tool to reduce this risk. I'm surprised how many QXL owners have already done this, just to speed up the integer performance of their machines.

QBranch News

V3.1 of Master Spy (see review of earlier version in QL Today issue x) is now released which will give a full screen on QXLs, Atari and Aurora. Contact QBranch for upgrade cost and further details. QCount (a pointer driven home accounts program by John Miller) is now in its Beta test stage and looking good, says Roy Wood.

QBranch will also be releasing some Z88 programs soon. There will be an assembler and a 'Windows' program [*oh dear...editor*] that will pass information to and from a PC in a much better fashion. The QL version of this is being finished at the moment and should follow shortly. No details of price or final format yet, but the Z88 side of the software may be released on a pre-blown EPROM. QBranch were at the time of writing (late February) awaiting the test package from Gunther Strube, the author.

QBranch are investigating the possibility of making another batch of Super Gold Cards. The last 40 of the batch made for Quanta have now all gone, and since the Aurora will need a Super Gold Card for its 256 colour driver when that is released, Roy and Steve of QBranch feel that it is vital that Super Gold Cards remain available - they state it's a kind of statement of faith in the QL's immediate future and a statement of our commitment to manufacture them. The price of the new Super Gold Cards is as yet unknown, since it will depend on component and manufacturing price fluctuations, but QBranch hope to hold the price as close to the recent prices as possible.

JMS News

Lots of news from Jochen Merz Software. First of all, line 2 of the JMS-BOX (0203-502014) now supports 33,6k.

With SMSQ/E 2.80 and QPAC 1.37 you get a detailed Channels menu which displays all parameters used to open channels, e.g. PIPE_FRED or HISTORY_TEST, SER2D or PART etc.

The PIPE driver is updated to the same level as HISTORY, i.e. you can DIR PIPE, DEL and even WDEL them.

QPTR and the Window Manager are new: it is now possible to do WM.RPTR and RPTR calls with timeouts, from machine code and BASIC. How long were we waiting for this to happen!

The QDOS/SMS Reference manual is updated - all registered users will get a pack of update sheets in the next few days.

QPC's floppy disk handling is now up to 10 times faster! In addition, the installation with Windows 95 is much easier now. If you bought

QPC before middle of Dec, a manual update is worthwhile.

You can get a demo version of QPC to see how good and fast it is. It does everything the full version can do, except for saving to floppy and harddisk.

Two major improvements:

The Menu Extension is V7, with improvement on File-Select (FSEL), INFO, Directory-Select (DSEL), Character-Select (CHSL) and a new XBTN function, which allows you to create fancy buttons (even from BASIC) with flashing sprites or optional WAKE item etc.

QD grew into V9. Many user requests were realised:

- Column count starts at 1, not 0.
- Better File-Select handling, even for saving blocks or files with new name.
- Lines selected with CTRL Z can be stuffed into the HOTKEY buffer automatically.
- You can save empty files.
- The editor-window is colour configurable (you can have black ink on white paper, if you like).
- New, very useful command line parameters.
- Fill strings for shifted blocks are possible, you can now shift in "REMark", for example. Defaults configurable.
- Not enough room here to list all the other useful features, but one has to be mentioned: **WORD WRAP!!!**

Expanded Z88 now available from W.N.RICHARDSON & CO.

QL users who also use a Z88 portable computer may be interested to know that W. N. Richardson & Co. can now supply the Z88 with nearly six times the useable internal memory, by replacing the OZ3 32K ROM with the OZ4 plus 128k chip, this not only removes residual bugs in the OZ3 version, but increases the useable memory from 19,969 bytes to 114,944 bytes, with the additional advantage of creating in effect an extra slot. All this is done without increasing power consumption.

This allows up to 20 pages of text, or 1500 lines in any one document and an option to increase the memory up to 3 megabytes for storage in EPROM Packs.

The price of the expanded version will be £120 plus VAT, and existing machines can be upgraded for £60 + VAT, which will include a general overhaul.

To protect your Z88 and to keep it clean when not in use, a plastic carry case will be supplied if requested for £1 (usually £10) if this is added to any order over £20



FiFi II

A File finding and searching utility

Alf Kendall

Version II of this very useful and user friendly program has just been released. All the necessary files including English, French and German versions are on the master disc along with the ubiquitous menu_rext. As you would expect with a modern piece of software that runs under the Pointer Environment you use Config or the much better MenuConfig to set up the defaults which are loaded from the configuration blocks when the program is executed.

Assuming that the necessary extensions are loaded (WMAN, PTR_GEN, Menu_rext and WTimer) one just has to exec the FiFi file and it is waiting to go off hunting for file names or text. It is possible to pass parameters on the execution line if you so wish. For me I prefer to have a clean sheet and modify it as and when needed. The screen looks like the picture. Users of FiFi will note the similarity between this and the old version. The standard Pointer Environment icons for resize, move, escape and sleep need no explanation. I will briefly describe the function of the non-standard icons before I describe the program itself. HITting or DOing on the word "About" gives details on FiFi and its version number.

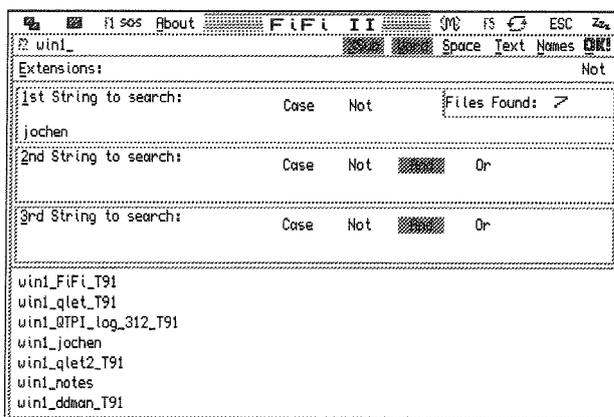
Pressing the F1 key activates the help facility which operates in a novel and very functional way. Alternatively you can HIT the "sos" item. Once you have turned on the help facility you just have to move the pointer over an icon or box and wait! For example if you leave the pointer over the "sos" icon after a few seconds a window opens with "help on help". This explains how the help works and how to adjust the delay time. To get rid of a help screen you just HIT Escape. If you move the pointer over any other item that you can select you get help on that item. The help facility will only function if the WTimer_bin has been loaded.

The "M" icon allows one to load or save macros. Macros within FiFi mean external command files which can be loaded while it is working. You may often want to search for particular files in particular directories so, to save having to set all the parameters each time, you can set up and then load a sort of command file to do the job for you. For example if you frequently want to look for the

word "Fred" in text files on win1_ you can, having set up FiFi as you want, go into this mode and save the parameters to a file of your choice. The above selection is saved as "\Dwin1_\T\S1Fred", which translates to please set the directory to win1_, look at 'T'ext files for the string Fred in string 1. I saved the file to ram1_fred. The next time you want to repeat the same search you simply click on the "M" icon, take the load macro option and enter the saved file name and away you go.

When you press F5 or HIT the icon next to it the "Status" window pops up. Here you can adjust the time delay for the help facility to pop up. At its lowest (fastest) setting the help screen pops up almost immediately. The Status window also allows you to divert the output of a search into a file for later reference. FiFi may of course be configured to output to a file but if that method is

used you cannot save different searches to different files. So using the F5 results (output file) facility makes saving multiple files much much easier. Enough general information



now on with the review. FiFi comes into its own when you have a hard disc but it can be used equally well by people with only floppies especially ED discs. The initial directory is set up by the configuration process but you can change it by using the F2 function at run time. Alternately you can HIT on the default directory and then edit it. If, on the other hand, you DO on it and you have menu_rext active you are taken into directory select mode.

"String to search" There are three such fields. One selects them by either tapping the numbers 1, 2 and 3 or by moving the pointer over them and HITting the one you want. In simple searches you enter the search text in field 1. The other two search fields are used for more complicated searches. You can HIT on Case, Not, And or Or and make more complicated searches. Without Case being selected a search for "the" would find both "the" and "The". If you were using search fields one and two and had "Not" selected for the second field you could find files that contain "Tom" that did Not contain "Dick". The "And" and "Or" options offer options to be more selective in ones searches, find files that contain string A

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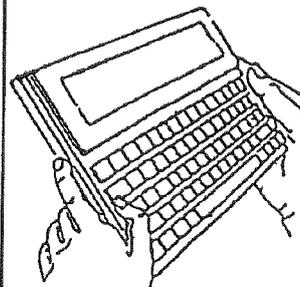
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JAN
97

and string B, or not contain string B, or even files that contain either string A or string B. The logic is simple and easy to work out.

I have so far mentioned the directory to be searched and the text to be searched. We now come to the other five options which are displayed on the second row of the screen. There are actually six but the OK option is the one used to start the search off. Starting on the left and working to the right.

The first option "XSub" is very simple a way of limiting the scope of the search. With this selected with a HIT you limit the search to the specified directory.

The next is "Word". When selected this simple ensures that the search string is a word and not part of a bigger word or at the end of a line etc. For example if the search string was "other" FiFi would ignore a word like "brother". The delimiting parameters for a "real" word in this context are <ENTER>, <SPACE> or any combination of ., ; : ! ? or ".

The next is Space. If you select this item, FiFi will also find strings if they contain several spaces or TABs where you used only one space in the search string. In this case, you must not use more than 1 consecutive space in the search string(s). This facility is supposed to be useful for programmers.

The next is Text. When selected FiFi will only look at text files i.e file which are non executable files.

The next is Names. This is selected if one wants to search for file names.

Finally there is OK! You click on this to start the search process. When you do this the <ESC> icon on the top row changes to "STOP". This is extremely handy if you realise after you have started a search that you have made a mistake in the search parameters.

FiFi is capable of searching for file names or text actually within files. If you know the name (or part of the name) of a saved file but do not remember where you filed it then FiFi will quickly find it for you. You simply enter the file name or part of it in the box 1st string to search, click on "Names" and then "OK". FiFi will immediately start searching for files containing the name you entered. Unlike FiFi version 1 a window opens and if a matching file is found its full file name is printed in this new window and the search continues. While the search continues you may examine the file that has been found by clicking on it and examine its contents. This really is multi tasking at its best. If you entered part of a file name like "dick" FiFi would find files called "dick_tom". The three

search fields can be linked with "ands", "ors" and "nots" if you really want to be clever!

If you are searching for text and not a file name, and you have no idea at all where the file is then leave it all to FiFi to start with the root directory and work through your winchester. If you know the file should be in a data directory then set it to win1_data_. Remember that the more help you can give FiFi the faster the answer will be provided. Simply enter the string to be searched in the 1st String to Select, ensure that "Names" is not active and then press "OK". As in the case of looking for file names a window open up under the main window and the found files are listed. A running total of files found is displayed. As mentioned above complicated searches may be made so files containing Jochen and/or Dilwyn but not Stewart may be found.

You can configure FiFi if you have QD resident so that if you "DO" on one of the found files it will load the file into QD and then find the search string for you. You can re DO on other files to find the correct file. The file you have Done is also stuffed into the stuffer buffer. While looking at files the searching is continuing, real multi-tasking.

There are two other commands at ones disposal. There is a field called "Extension" and another on the same line called "Not" If you entered "t91" in the extension field the search would ONLY be carried out on t91 files. Multiple extensions can be set as targets. The "Not" field removes the selected extension or extensions from the search parameters.

Finally there is feature which is vital on the rare occasions that you want it. That is the ability to search for strings containing non printing characters. This is admittedly not something one needs to do every day, but if you wanted to find the string 1.9.94 in a LINEdesign file which is stored as

"1<null>.<null>9<null>.<null>9<null>4".

As shipped the character to denote the start of a non printable character is the "\$" sign, but this may be configured should you wish it. The default search string for the above date becomes,

"1\$00.\$009\$00.\$009\$004".

In general terms to find a non-printable character in a file, you have to include in the search string a '\$' followed by the hex code of the required character. It should be valid HEX with always two figures (e.g. 01 or AB or 00 e.t.c.).

For example ABCD\$01EFG will search for the string ABCD followed by ASCII code 1 (e.g. like CHR\$(1) in Basic) followed by EFG – the '\$01' is simply replaced during the search by the ASCII code 1.

As the \$ sign now indicates the start of a hex

code sequence you have to replace it by \$\$ (a double dollar sign) if you want to search for the dollar sign itself. For example ABC\$DEF would find ABC followed by the hex code DE followed by F, but ABC\$\$DEF will find the string ABC\$DEF.

You can also search for multiple hex bytes if you want to, by preceding each with the dollar sign, e.g. ABCD\$00\$01\$02EFG. You would probably be mad to do it but by setting the string to be \$63\$61\$74\$73 you could find all references to cats!!

One word of caution, if you enter an impossible hex code like \$+- it does not actually matter, but giving one or no characters after the \$ will upset the memory of your machine which MAY result in a crash, so be careful!

During the course of writing this review an oddity was found. I had FiFi configured as mentioned above so that a QD loaded the file into QD. The search was to find the "zone" in text. Not only did FiFi find the desired file but she also found a file "win1_u_ld_pf_broadway_pff" which did not seem to have the word zone in it. It transpires that when FiFi does a search in converts what you type into upper case and then looks for that. What FiFi actually found was "zùNæ" and QD was unable to find "zone" so simply put the cursor at the front of the file. If FiFi is left in its default state it will and does find the word "zùNæ" in the file and displays it in the view window. I am sure that you would rather have the very rare case of a wrong find rather than missing a file altogether. *[I guess that the upper/lowercase conversion may have this effect on special characters, as they are not in any "real" order; otherwise character conversion would be too slow - Editor]*

There is another complication/problem associated with using FiFi and having QD resident. At the time that I am writing this QD does NOT find a case sensitive search item. By that I mean that if you had carried out a search for "The" QD will position the cursor on the first occurrence of "the" in the file. I understand that a modified QD is being prepared and this slight problem has and will be cured in the next revision. *[QD v9 will have this feature, along with many, many others - but be patient, it'll take a while - Editor]*

In summary, FiFi is in my view an exceptional program that carries out its design function in an exemplary way. It is well worth getting the update to version 4.



True Confessions

Geoff Wicks

I disgraced myself at the last QL Meeting in Eindhoven. The shock I caused could not have been greater than if I had danced naked on the tables. In the presence of two of the great eminences of the QL community I uttered the ultimate heresy, "I don't use buttons".

These two gentlemen were so distressed that it would be wrong of me to write anything that would reveal their identities. Suffice it to say that one was a person who has produced the occasional miracle for the QL and who, even if he has not yet fully mastered the art of walking on water, could, I am sure, cycle on it. He asked me if I could still remember the dinosaurs, which, of course, I can.

The other person can truly be described as a "button man". He has so many buttons on his screen that I wonder whether he can see the wood for the trees. (If this were a television documentary, at this point the director would call, "Cue branches"). I became quite abusive to this poor fellow and said his buttons reminded me of a general's medals. They were merely the external manifestation of an innate and deep-rooted insecurity.

At this stage I must confess to being a bit of a luddite, particularly when I look at our friends in the PC community. One of the first PC programs I used was the Dutch railways' electronic timetable. I ran it using Solution on a Trump Card QL. It was unbelievably slow. The QL community joked of a new Bench Mark. How many trains did you miss before it came up with an answer? Nevertheless it worked and eventually under PC Conqueror and a Gold Card it ran at a usable speed.

Nowadays I can buy this program in two versions, MS-DOS or Windows. The windows version requires 4Mb, needs at least a 386 processor and costs 50% more, but all it does is the same as the MS-DOS version in the days of Solution and Trump Cards. It tells me the time of the trains! Why pay extra just for a pretty screen!

This brings me to my point. Why do we need buttons if we can get the same result more simply? Most of my work on the QL is done on just 3 programs, Perfection, Xchange and Style-Check. Often I multitask these. Occasionally I will need another such as a calender or my thesaurus. If I am writing software I will probably have Perfection, Stripsearch and the basic and compiled version of the programs multitasking. When preparing advertisements and publicity material I will have Perfection, LineDesign and perhaps Image Processor multitasking.



When I am multitasking I do not want my screen cluttered up with a lot of irrelevant information, and I want to move from one program to another with the minimum of key presses. For example, if I style-check a short document I will usually do it on screen, and will move frequently between Perfection and Style-Check to make any changes. In this situation buttons only get into the way. What is simpler than a couple of quick taps on Ctrl + C?

What I have in common with the button freaks is that I am a QPAC 2 enthusiast. My affection for this program increased when I started using a QXL as my main machine, which brought home to me the differences between multitasking under Windows and multitasking under QPAC 2. Nevertheless QPAC 2 has a bad reputation among many QL users, partly because of its unhelpful manual and partly because of the jargon of the QL experts, which make it appear a more complicated program than it is.

In the first issue of QL-TODAY Jochen Merz printed his BOOT program for the Pointer Environment and QPAC 2. It is an impressive program, which is well worth studying, but it is long and complicated. (I have a fantasy that the first thing Jochen does when he gets up in the morning is switch on his computer. By the time everything is loaded and has initialised it is already dark and time to go back to bed. What other explanation can there be for those 3.00 a.m. faxes to Stuart Honeyball?) [*My machines boot up in about 15 seconds, i.e. MUCH faster than most PeeZee systems, and I never turn them off anyway — Jochen*]. If you are new to the Pointer Environment and QPAC 2, this is the last boot program you should be looking at. You will learn far more from studying the boot programs in the QPAC 2 manual or those accompanying the Public Domain QPACER program.

Jochen warns that you cannot have a proper boot program ready in a few hours. His own program took 7 years to develop. A boot program is not static, but evolves constantly as your hardware, software, computing skills and computing needs change. There is no reason why your boot should not be simple (and a boot program without buttons can be simple) if it is adequate for your everyday needs.

Instead of buttons I make use of the HOTKEY menu of QPAC 2. I have 3 different hotkeys for Perfection. One loads Perfection on its own and the other two Perfection with either an English or Dutch Spellchecker. I also have hotkeys for Xchange, LineDesign and my own program range. These are the programs I use most frequently. In addition I have hotkeys for a small routine to print my address on letters and to switch my printer to

reduction mode. Finally I have hotkeys to call up QPAC 2 menus such as system defaults, files and jobs.

"Aha", I hear the button merchants say, "that's an awful lot of Hotkeys to remember." No it is not. I just have to remember one. ALt + H calls up the hotkey menu, and I can just scroll through this to choose the program I want. If a program is not on the menu I can call up the QPAC 2 files menu and start it from there. If I want to remove some programs from memory I can call up the RJOBS menu and remove them. It is a perfect multitasking environment without the use of buttons.

Let me now throw out a challenge to those QL users who cannot survive without their row of "General's Medals" at the top of their screen. Let them write an article for QL Today explaining why Buttons would be better than what I am doing. That may seem simple, but now comes the difficult bit. It should be written so that every QL user, whatever his level, can understand it. It should be written so that any user suffering from "button phobia" will be stimulated to rewrite his boot program.

Until the button freaks convince me otherwise I shall persist in my heretical ways. If at your next QL show you see certain traders wearing cloves of garlic and waving crucifixes, you will know which evil influence they are seeking to exorcise from the QL community.



Snippet's Corner - Part 3

M. Knight

This issue we are dealing with money. The main PROCEDURE provided for this requires the Leading_ZERO\$, Long_INTEGER\$ and Long_NUMBER\$ FuNctions to be present from previous articles before it will work. It enables SuperBASIC to deal effectively with amounts from £-21,474,836.48 to £21,474,836.47. If you want to write a QL accounts program this should be an adequate limit and if your customers find themselves running foul of it they can pay you (or better still me) to convert the data for another package!

Note that these limits are rather approximate for multiplication and division, but reasonably exact for addition and subtraction. You will only get really accurate results if you compile your SuperBASIC with the Turbo compiler and it is best to restrict the range to about plus or minus £20,000,000.00 if you are not using Turbo. If you wish to experiment and test the exact ranges and restrictions then go ahead, but remember you will



Professional & Graphical Software

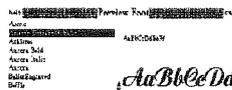
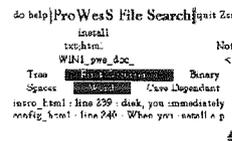
New Software

fsearch

file search utility, working under ProWesS (easy install etc.) See the picture at the right. Displays all occurrences of the search string, with line number. Many search options.

fontutils

some ProWesS font utilities which help manage your fonts. Includes programs to convert Type 1 (.pfa & .pfb & .gsf) fonts for use by PROforma. Also a program to preview the available fonts and a utility to show all the letters in a font (screen or printer).



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.

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.

What's more you can choose to look at only those fields you want, and in any order you specify. And you can select which records you want to view, and which not.

DATAdesign allows you to have some hidden comments for each record, have a general look at the file (in tabulated form) or to transfer a record into the scrap of hotkey buffer, so you can easily import a record in your favorite text processor or editor!

Security is a strong point for DATAdesign. Usually files will be memory based, for maximum speed. Files can also be disk based, making sure all changes are immediately stored on disk, so even in the event of power failure, you can at most lose the changes to one record!

Naturally, DATAdesign is good at sorting and searching. And if you were using another database, you can convert Archive or Flashback files to DATAdesign.

The new v4 of DATAdesign makes the program even easier to use than before. You can now also have QD-style icons on your screen to make the program even easier to operate.

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).

All our software has electronic manuals, which can be read and printed in the ProWesS reader. However, we can also supply printed copies of the documentation (or even your own HTML files). The costs are BEF 3 per page, plus postage costs. Contact us for more details. ProWesS does not include the programming documentation. This is available via bulletin board and public domain software suppliers. The programming documentation is readable in the ProWesS reader, and partly in DATAdesign (the demo version is included). We can supply the programming docs for BEF 100 (HD disks only!) If ordered with something else, you don't have to pay extra postage.

ProWesS - BEF 2400

DATAdesign - BEF 1200

fontpack - BEF 3000

PFlist - BEF 600

Payment terms :

fontutils - BEF 1200

fsearch - BEF 600

You have to run ProWesS to make 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 cost 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.

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	Belgium	Europe	World	Belgium	Europe	World
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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

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have to do a lot of arithmetic on something other than the SuperBASIC interpreter to check the results.

There are also legal requirements for accounting packages which recognise the limitations of computers with regard to rounding errors, and allow you to use integers as long as you are within certain prescribed accuracy limits. Don't write an accounts package without checking the legal requirements in any countries where you intend to sell it.

The FuNction `Convert_MONEY$` takes a parameter representing the amount of cash in pence (cents or whatever) and returns a string representing the amount of money in pounds and pence (or dollars and cents etc). In conjunction with previously provided FuNctions it can allow you to do all kinds of arithmetic and presentation with money within your SuperBASIC programs.

The `Dec_ALIGN%` FuNction help when you want to decimal align numbers in a column, as illustrated by the demo listing. It works with strings so use `Long_NUMBER$`, `Convert_MONEY$` or `Long_INTEGER$` first, along with `Comma_SEP$`, before you use

`Dec_ALIGN%` on a number. It will often work with just the number using SuperBASIC coercion but test such programs carefully as there can be subtle bugs. This is a slight variation of a routine first published into the public domain years ago in QUANTA.

As a minor addition look at `True_RANDOMISE` which improves upon the `QL_RANDOMISE` keyword. The trouble with `RANDOMISE` is it doesn't work very well, and `RANDOMISE DATE` is a waste of time as the parameter is out of the sixteen bit range of `RANDOMISE`, yet the routine takes the most significant bits which don't vary often enough to be effective. `RANDOMISE` on its own gives the same sequence each time the QL is reset! `True_RANDOMISE` run once at the beginning of a program run will give only a 1 in 65,536 chance of the same sequence which has to be an improvement.

Those without Turbo Toolkit but who have SuperToolkit II on their system should use the following two replacement lines in this PROCEDURE instead of those in the listing:

```
30670 Tk_RandomBase=ALCHP(4)
30705 RECHP Tk_RandomBase
```

Listing 3.

```
100 MODE 4
110 WINDOW 504,202,4,23
120 WINDOW#2;504,202,4,23
130 WINDOW#0;504,32,4,224
140 FOR Chan=0 TO 2
150 PAPER#Chan;0
160 INK#Chan;7
170 BORDER#Chan;1,2
180 CLS#Chan
190 END FOR Chan
200 :
210 Cash="1234567890"
220 PRINT "Starting with ";Convert_MONEY$((Cash))
230 Tax=34
240 TaxMult=Tax/100
250 Deduct=INT(Cash*TaxMult)
260 Cash=Cash-Deduct
270 PRINT"Paying "&Tax&"% tax ('"&Convert_MONEY$((Deduct))&") leaves '";
280 PRINT Convert_MONEY$((Cash))
290 :
300 PRINT\"Random cash amounts decimal justified:"\\
310 FOR Test=1 TO 9
320 TestCash=INT(RND*(10^Test))
330 PRINT TO 21-Dec_ALIGN%(Comma_SEP$(Convert_MONEY$((TestCash)),2,",");""
&Comma_SEP$(Convert_MONEY$((TestCash)),2,",")
340 END FOR Test
350 PRINT\"The upper limit is:"\\
```

```

360 TestCash="2147483647"
370 PRINT TO 21-Dec_ALIGN%(Comma_SEP$(Convert_MONEY$((TestCash)),2,",");""&Comma_
SEP$(Convert_MONEY$((TestCash)),2,",")
380 :
30540 DEFine FuNction Convert_MONEY$(Tk_Pence)
30545   LOCal Tk_Pounds,Tk_Negative%
30550   LOCal Tk_Minus$(1)
30555   Tk_Negative%=0
30560   IF Tk_Pence<0 THEN
30565     Tk_Negative%=1
30570     Tk_Pence=ABS(Tk_Pence)
30575   END IF
30580   Tk_Pence=INT(Tk_Pence)
30585   IF Tk_Pence<1 THEN RETurn "0.00"
30590   Tk_Pounds=INT(Tk_Pence/100)
30595   Tk_Pence=Tk_Pence-(Tk_Pounds*100)
30600   IF Tk_Negative%=0 THEN
30605     Tk_Minus$=""
30610   ELSE
30615     Tk_Minus$="-"
30620   END IF
30625   RETurn Tk_Minus$&Long_INTEGER$(Tk_Pounds)&"."&Leading_ZERO$(Tk_Pence,2,"0")
30630 END DEFine Convert_MONEY$
30635 :
30640 DEFine FuNction Dec_ALIGN$(Tk_DecNumber$)
30645   RETurn LEN(Tk_DecNumber$)*("." INSTR Tk_DecNumber$=0)+("." INSTR Tk_DecNumb
er$-1)*("." INSTR Tk_DecNumber$<>0)
30650 END DEFine Dec_ALIGN%
30655 :
30660 DEFine PROCedure True_RANDOMISE
30665   LOCal Tk_RandomBase
30670   Tk_RandomBase=ALLOCATION(4)
30675   IF Tk_RandomBase<0 THEN
30680     RANDOMISE
30685     RETurn
30690   END IF
30695   POKE_L Tk_RandomBase,DATE
30700   RANDOMISE PEEK_W(Tk_RandomBase+2)
30705   DEALLOCATE Tk_RandomBase
30710 END DEFine True_RANDOMISE
30715 :
■

```

Integrating config Blocks for C68

J.D. Mitchell

What are config blocks ?

Config blocks are the future! Config blocks are easy to use! Config blocks let the user decide!

Actually config blocks are just a standard way to configure a programme, the same configure utility can be used for any programme which supports

config blocks. Thus the config programme supplied with DATADESIGN can be used on QED, XCHANGE, QTPI, GSTMAC, etc.. Config blocks are data areas in a (usually EXECable) file, the config blocks holds information about each of the configurable values, e.g. name, valid range, special processing, etc.. All of this information is read by the config utility, which then lets the user change the values.

Why doesn't every one use them?

Most of the modern professional S/W written today uses config blocks. But writing config blocks



in assembler is not easy, and writing them in C and trying to keep program versions numbers etc. in sync is even worse.

The following is my solution to this problem. It currently supports only the simpler types of configurable item but can be extended as required.

What this does

This article shows how to add config blocks to C programmes, and includes all the required macros, type definitions and a test programme.

What language to code the config blocks in?

C68 - Unfortunately C68 can't do constants which are relative pointers, and config blocks need these.

AS68 - This is the assembler as supplied with C68, it is intended for use only by compilers, so isn't very friendly. It can with difficulty do relative pointers as constants. But its only macro support is via CPP (the C68 pre-processor), and CPP can't do the complex looping macros required to make config blocks practical for the beginner.

GST MAC - This is probably the best assembler available for the QL with a very powerful macro language, but it can't read C68 style macros.

How then?

No one would usually do it, but there is nothing to stop you using CPP to substitute in any C68 style macro, and then passing the result to GST MAC for its macro language to do the real hard work.

This solution sounds a bit of a mess, but most of it is invisible to the programmer and it works.

You will need

- 1) A fairly recent version of C68 (available from most QL Bulletin boards).
- 2) A C68 compatible version (e.g. V1.8) of GST MACRO Assembler (available from Quanta).
- 3) The macro and include files listed at the end of this article (available from the author).
- 4) A config programme (e.g. Config or Menuconfig) to configure GST MAC and to test the test programme (available with most modern programmes).

Configuring GST MAC

Happily GST MAC uses config blocks itself, so just run your copy of Config or Menuconfig and set the following:

- 1) Assembler source file extension to "_asm"
- 2) Relocatable object file extension to "_o"

The make utility

The MAKE utility automates the compiling, linking etc. of a program. MAKE will also automatically recompiles only items that have changed, so when you make a minor change you need not compile everything. MAKE works by checking the dates and times on files, but to do this it needs to know how a file should be built and what from. To tell it this we create a make file (traditionally ending in "_mak").

The make file

Rules built in to MAKE tell it what to do when faced with a file ending in "_c" which is dependent on a file ending in "_h". But it doesn't know what to do with a file ending in "_asm" or with "_casm". To add these to the rules we put the following at the bottom of the make file:

```
# _asm files are compiled into _o files _asm.o :
# by executing MAC
# with the full change file name and MACFLAGS
${MAC} $< ${MACFLAGS}

# _casm files are compiled into _o files _casm.o :
# by executing CPP
# with "-P", the full changed file name
# and the file name with a "_asm" suffix
# to produce an _asm file
${CPP} -P $< ${*_asm}
# then executing MAC
# with the file name with a "_asm" suffix
# and MACFLAGS
# to produce a _o file
${MAC} ${*_asm} ${MACFLAGS}
# then deleting the temporary _asm file
${RM} ${*_asm}
```

Now at the top of the make file we tell it where to find MAC, CPP & RM, and what MACFLAGS & CPPFLAGS are:

```
# CPPFLAGS - check win1_custom_cfg_ for include files
CPPFLAGS = -Iwin1_custom_cfg_
# CPP is in the program subdirectory and uses CPPFLAGS
CPP = ${P}cpp ${CPPFLAGS}
# RMFLAGS - don't prompt for confirmation
RMFLAGS = -f
# RM is in the program subdirectory and uses RMFLAGS
RM = ${P}rm ${RMFLAGS}
# MACFLAGS = generate a listing file
# without symbol table, but with error messages
MACFLAGS = -LIST -NOSYM -ERRORS
MAC = win3_gstmac_qmac
```

Now CPP should be told where the program sub-directory is, and what order to compile in:

```
# Do any _casm files first, then _x files etc.
.SUFFIXES : _casm _x _s _asm _o _rel _hdr _h
# The program directory is win3_c68_
P = win3_c68_
```

The user macros

The actual config block definitions will be done in one of these `_casm` files, via some rather complex macros. But these macros are only complex to protect the user from the actual layout of a config block. As a beginner the macros you will use are:

CONFIG_START - This indicates the start of a config block, it takes 4 arguments:

- 1) name of the `c` variable used to access this block
- 2) config block style (use "01")
- 3) program name
- 4) program version

CONFIG_STRING - This adds string input to the current config block it, takes 5 arguments:

- 1) Textual description
- 2) Selection key
- 3) maximum length of string
- 4) default/initial value
- 5) attribute - set bit zero to retain trailing spaces

CONFIG_CODE - This adds a code input ('code' is what the QPTR manual calls it, humans

```
#include <cfgbuild.h>
#include "configconst.h"

config_start  config_block, {"01"}, {PROG_NAME}, {VERSION}
config_string {"Default extension"}, 'E', 6, {"_o"}, 0
config_code   {"Listing"}, 'L', OPTION_YES
config_code_opt {"No"}, 'N', OPTION_NO
config_code_opt {"Yes"}, 'Y', OPTION_YES
config_end
end
```

Testing the example config block

This can be done with the following file:

```
#include <stdio.h>
#include <cfg.h>
#include "configconst.h"

#ifndef _CFG_H
#include <cfg.h>
#endif

extern config_value_ty*
config_block[];

char  _prog_name[] = PROG_NAME;
char  _version[] = VERSION;
char  _copyright[] = COPYRIGHT;

void  main( int argc, char *argv[] )
{
printf( "config_block[0]->string.value.qs_str=\"%s\"\n",
config_block[0]->string.value.qs_str );
printf( "config_block[1]->code.value=%d\n",
config_block[1]->code.value );
}
```

would say selection). It must be followed by some **CONFIG_CODE_OPT** calls and takes 3 arguments:

- 1) Textual description
- 2) Selection key
- 3) Default/initial value

CONFIG_CODE_OPT - This defines the options the preceding **CONFIG_CODE** macro allows, it takes 3 arguments:

- 1) Textual description
- 2) Selection key
- 3) Value for this option

CONFIG_END - This indicates the end of a config block, it has no arguments.

An example config block

This example definition file (which would be called something like `config_casm`) doesn't do any thing useful, but it shows the principles. Note that while the macros will translate C style strings (with double quotes) into GST MAC style strings (with single quotes), any C style string (or macro defined as one) must be enclosed in GST MAC macro quotes ("{" and "}").



```
exit( ERR_OK );
}
```

Credits due to

Much of the information on the assembler config blocks, and all of the neat little procedure to ensure config block strings have nulls at the end so C can read them is based on an article written by Jonathan Hudson.

News flash

1) C68 now contains a second assembler called GWASS, this has better macro support, but it is not clear if this will currently run on an QL with less than a 68020 cpu. I.e. you might need a Super Gold Card or QXL to run it.

2) The author is working on a replacement to AS68 which properly supports relative constants, and will include a macro language compatible with GST MAC, but the macro support is awaiting implementation. It is currently much slower than AS68 and it hasn't been fully tested yet.

CFG_H file

This file defines the C types used to provide access to the config block data, it should be in one of the directories searched by CPP when looking for include files.

```
#ifndef _QDOS_H
#include <qdos_h>
#endif

typedef struct{
shortmax_len;
QLSTR_t value;
}config_value_string_ty;

typedef struct{
charvalue;
}config_value_code_ty;

typedef union{
config_value_string_tystring;
config_value_code_tycode;
}config_value_ty;
```

CFGBUILD_H file

This file defines the skeleton of the config block definition file, it should be in one of the directories searched by CPP when looking for include files. Note that the include command in this file is done by GST MAC not by CPP.

```
title Config block definition
nolist
include 'win1_custom_cfg_cfgmacros_inc'

expand
list
section config
```

CFGMACROS_INC file

This file holds the GST MAC macros which do all the hardwork. The file will be explicitly included by CFGBUILD_H, so it must be in the subdirectory specified there. Note that these macros store a lot of tempory information by using GST MAC symbols; with really large config blocks this could become a problem.

```
* Macro to change "<text>" of C style string constants to '<text>' ASM style
* And remove leading/trailing blanks
cbytes$      macro    A
              local   t,t1,t2,cquote,gstquote
```



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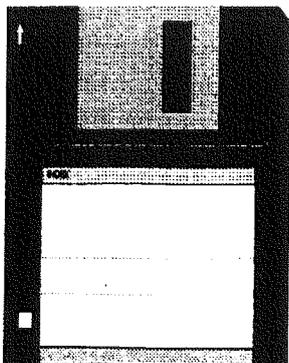
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```

t          setstr  {[A]}
cquote    setstr  {""}
t2        setnum  [.instr(t,cquote)]
          ifnum  [t2] = 0 goto gststring
gstquote  setstr  {''}
t1        setnum  [.instr(t,gstquote)]
          ifnum  [t1] = 0 goto cstring
          ifnum  [t1] < [t2] goto gststring
cstring   maclab
t          setstr  {'[.right(t,[.len(t)]-[t2])]}
t2        setnum  [.instr(t,cquote)]-1
t          setstr  {[.left(t,[t2])]}
gststring maclab
[.lab]    dc.b    [t]
          endm

* Config Block declaration
* Define a QD_text type string
string$   macro   A
[.lab]    dc.w    .e.[.1]-.s.[.1]
.s.[.1]   cbytes$ {[A]}
.e.[.1]   ds.w    0
          endm

* Define a Config string item, max size, then a QD_text (len, chrs),
* and then some blank ds.b stuff to pad to max size.
conf$     macro   A B
[.lab]    dc.w    [A]
          dc.w    .e.[.1]-.s.[.1]
.s.[.1]   cbytes$ {[B]}
.e.[.1]   dc.b    0
          ds.b    ([A]-1-.e.[.1]+.s.[.1])
          ds.w    0
          endm

* Define main config block start
config_start macro config_block_name,lv1,sw_name,sw_ver
          ds.w    0
          dc.b    '<<QCFX>>'
          cbytes$ {[lv1]}
block_name setstr  {[config_block_name]}
block      setstr  b[.1]
postit_reqd setstr FALSE
no_items   setnum  0
          string$ {[sw_name]}
          string$ {[sw_ver]}
          endm

* Define main config string item
config_string macro description,sel_key,max_len,default,attr
postit_reqd setstr TRUE
prefix      setstr [block]_[no_items]_
[prefix]type setstr STRING
[prefix]desc setstr {[description]}
[prefix]len setnum [max_len]
[prefix]def setstr {[default]}
[prefix]attr setnum [attr]
          ds.w    0
[.lab]     dc.b    0
          dc.b    [sel_key]
          dc.w    .[prefix]val-*
          dc.w    0
          dc.w    postit-*
          dc.w    .[prefix]txt-*
          dc.w    .[prefix]attr-*
no_items   setnum [no_items]+1
          endm

```

```

config_string macro prefix
.[prefix]txt string$ {[[prefix]desc]}
.[prefix]val conf$  [[prefix]len],[[prefix]def]}
.[prefix]attr dc.w  [[prefix]attr]
endm

* Define main config code item
config_code macro description,sel_key,default
prefix setstr [block]_[no_items]_
[prefix]type setstr {CODE}
[prefix]desc setstr {[description]}
[prefix]def setstr {[default]}
[prefix]no_opts setnum 0
ds.w 0
[.lab] dc.b 4
dc.b [sel_key]
dc.w .[prefix]val-*
dc.w 0
dc.w 0
dc.w .[prefix]txt-*
dc.w .[prefix]attr-*
no_items setnum [no_items]+1
endm

* Define main config code_opt item
config_code_opt macro description,sel_key,value
local opt_pre
ifstr {[[prefix]type]} <> {CODE} goto not_code
opt_pre setstr [prefix]_[[prefix]no_opts]
[opt_pre]_desc setstr {[description]}
[opt_pre]_selk setstr {[sel_key]}
[opt_pre]_value setnum [value]
[prefix]no_opts setnum [[prefix]no_opts]+1
goto exit1
not_code maclab
error config_code_opt called after [[prefix]type]
exit1 maclab
endm

config_code macro prefix
local count,opt_pre
.[prefix]txt string$ {[[prefix]desc]}
.[prefix]val dc.b [[prefix]def]
ds.w 0
.[prefix]attr
count setnum 0
loop maclab
ifnum [count] >= [[prefix]no_opts] goto exit
opt_pre setstr [prefix]_[count]
dc.b [[opt_pre]_value]
dc.b [[opt_pre]_selk]
string$ {[[opt_pre]_desc]}
count setnum [count]+1
goto loop
exit maclab
dc.w -1
endm

config_end macro
local count,prefix
dc.w -1
* Table of pointers to the values
ds.w 0
xdef _[block_name]
_[block_name]:
count setnum 0
loop1 maclab
ifnum [count] >= [no_items] goto exit1
prefix setstr [block]_[count]_

```



Q Branch

Feeling out on a limb ?

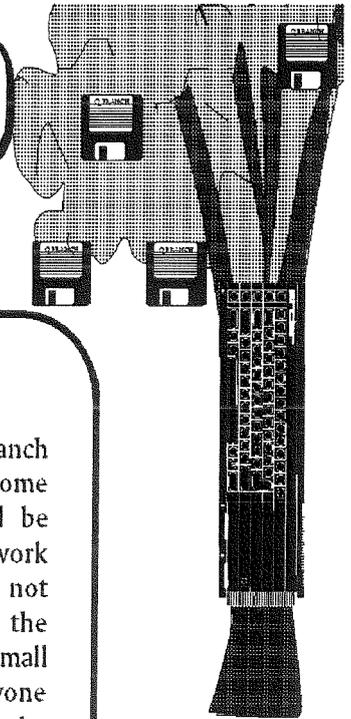
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Q Branch News

The ex Quanta Super Gold Cards are all sold out now and Q Branch Have decided that the demand has been high enough to make some more. The situation at the moment is that Miracle Systems will be handing the production of Super Gold Cards over to us while they work on new products. We are still costing this out and, as yet, we do not know what the final costs will be but we want to hold it as close to the previous price as possible. At the time of writing this we have a small stock of Gold Cards and a larger stock of 8 meg QXL IIs. Anyone wishing to buy one of these should call, email or fax us to check the availability before ordering.

We have a number of new products in the wings and we hope have some of these available very soon. PROGS hope to have version 2.10 of LINEdesign available very soon now and the really good news is that the price of this program will be very much lower than previous versions. The new version will run under ProWesS but will not be supplied with the clipart and fontpackages that previous versions have had. There are, however, many fonts and clipart collections available in the Public Domain. We ourselves have a couple of new packages coming out including a pointer driven accounts program and a new pointer driven Z88 transfer package. Watch this space for more details.

Hardware

QXL II	£ 200.00
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+ SMSQ/E for the QL	£ 180.00
Gold Cards	£ 60.00
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Trade in values :

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Aurora comes complete with a cable which terminates in a standard 12 pin 'D' socket for connection to a PC VGA / SVGA monitor. Other cables such as SER1 / SER2, QIMI mouse, QL monitor, Network and SGC parallel cables must be purchased seperately.

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*New
Version*

We now have a new version of the famous Master Spy editor from ARK. This version has been upgraded to make it able to use the extended screen resolutions available from QXLs, Auroras and other large screen emulators. It is a very fast and small editor of suprising versatility.

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and from the SPY (any version) £ 25.00

There are several other new products being developed at the moment and many more in our detailed catalogue. Send an A 5 stamped addressed envelope to the address on the previous page for a full list.

```

count      dc.l    .[prefix]val
           setnum  [count]+1
           goto  loop1
exit1      maclab
           dc.l    0
count      setnum  0
loop2      maclab
           ifnum  [count] >= [no_items] goto exit2
prefix     setstr  [block]_[count]_
           config_ [[prefix]type] [prefix]
count      setnum  [count]+1
           goto  loop2
exit2      maclab
           ifstr  [.def(postit)] = TRUE goto exit3
           ifstr  [postit_reqd] = FALSE goto exit3

* This little bit of code is called by the Config program to do
* the post processing. It adds a NUL to the end of the strings for 'C'.

*
*      a0 = pointer to item
*      0(a0) == max length
*      2(a0) == actual length
*      4(a0) == start of text
*
Postit      ds.w    0
           move.w  2(a0),d2                ; the length
           move.b  #0,4(a0,d2.w)         ; all set for 'C'
           moveq   #0,d0                  ; return OK
           rts
exit3      maclab
           endm

```

example CONFIGCONST_H file

This file defines the constants shared between the C program and the config block definition file. It will be different for each program you write.

```

#define PROG_NAME    "Config block test"
#define VERSION      "1.00"
#define COPYRIGHT    " J.D.Mitchell"

#define OPTION_NO    0
#define OPTION_YES   1

```

The Hove Quanta Workshop

The Excelsior Hotel was the venue, Sunday the 2nd of February was the date, and the organiser was Roy Wood. This well attended show got the Quanta programme of events off to a flying start for 1997. Or perhaps I should say, off to a standing start, since there were several power cuts during the first couple of hours of the workshop, leaving many of the people present in the dark (literally!) about what was going on. The problem was later tracked down to a user's faulty mains 4-way extension causing hotel circuit breakers to trip. This probably raises questions of safety at these workshops, where

it is often the case that many users daisy chain from mains adaptors due to lack of power points for individual users. In this case, no personal injury was caused, and few users seemed to be complaining of bad cases of data loss and so on. The basement rooms used for this workshop were fortunately generously equipped with power points.

Car parking was a real problem at this venue, since the hotel's car park only accommodated a small handful of cars, and the nearby on-street parking was fully occupied by local residents. A narrow stair case descended from the rear access road down to the room used for talks and lectures, which sided onto the room used for the workshop itself. The talks area was thus prone to frequent interruptions from people wishing to go in or out of this rear entrance. Other than that, it was fine. Sadly, there was one case of a trader who injured

himself after falling from this staircase as he carried in his stock and equipment down to the basement rooms.

The main room itself showed early signs of overcrowding, as the number of traders and users who required table space threatened to overwhelm the amount of tables and floor space available. A little bit of friendly negotiation and give and take helped make everyone happy.

The previous night, a Dutch Treat dinner had been arranged for those who were staying overnight. These occasions always prove to be a good social event prior to the show proper, and this was no exception. If the quality of the meal and service were anything to go by, this is going to be a popular future venue for QL shows.

Traders present at the show included QBranch, Quo Vadis Design, Qubbesoft P/D, W. N. Richardson and Co., Jochen Merz Software and TF Services. Stuart Honeyball of Miracle Systems was also present, and spent his day refurbishing Gold Cards and answering hardware queries on the QBranch stand. QBranch themselves have done a roaring trade in Gold Cards, Super Gold Cards and QXLs since taking over the retailing of Miracle's range of products. The demand for Super Gold Cards in particular seems to have been stimulated by the appearance of Aurora and of course the general price reduction of Miracle products in recent months. QBranch continue to press for the release of new and updated software. Recent work from them has included an updated version of the Master Spy editor, while future releases should include Q-Count, a pointer driven home accounts programme, and looking even further ahead, one author is currently attempting to implement a RouteFinder type of programme, a very ambitious project, but should it come to being, will prove to be a very popular application for QL users. Also, QBranch had some recent releases from Belgian software house Progs, including the recently revised Font Utils applications originally reviewed in QL Today.

Qubbesoft P/D demonstrated their new Aurora motherboard. This compact unit replaces the original QL motherboard, making it much easier for users to install upgraded systems in tower cases and the like. Qubbesoft can supply the entire range of products required to make such an enhanced

QL, including the QPlane backplane board, and the Qubide IDE hard disk interface. The Qubide is now back in production following a shortage at the start of 1997 and the ROM version is already at 1.53. Early rom version upgrades were free or for postage costs, but Qubide users can expect to pay a 5 pound upgrade fee now that the rom version is fairly stable and bug free. Later in the year, Qubbesoft plan to launch the Goldfire expansion unit, previously dubbed the Super Duper Gold Card, planned to use readily available PC memory boards, for example, and possibly with a bidirectional parallel port, opening up the possibility of attachment of parallel port interface hardware once suitable device drivers become available. At the time of writing, the 256 colour mode drivers for Aurora had not yet become available, while it looked as though the 16 colour mode drivers may be delayed or postponed.



John Reeves talks to Keith Mitchell at the Bring and Buy Stand

John Southern and Colin Murphy were actively occupied in building Aurora systems for users at the show, and anyone could look in and see these systems being built. Nearby, you had the opportunity to learn a few new swear words as the QL Today editor struggled to get his Aurora system up and running *[It is now up and running, so forgiven for annoying me during the show - Editor]* - perhaps we'll hear a few less complaints in QL Today about your PC now, Dilwyn? *[Don't bet on it! - Editor]*. It was interesting to hear from John Southern that some members of the North East Manchester group are looking into the possibility of producing a purpose-made case (to be called Pandora or Pandora's Box) for Aurora systems, capable of taking a PC style power supply, a couple of floppy drives and a hard drive, with

room in the centre for Aurora, QPlane and as many cards as the QPlane can take. This would probably make the case about 6 inches high and slightly longer than a typical mini tower case. This idea is in the early stages at the moment and may not come to fruition if the costs or other considerations make it not worthwhile.

Phil Borman, whose work includes the software used on the Qubide and Fastnet systems from Qubbesoft, was in attendance. He has been involved in testing the extended colour mode drivers for Aurora from Tony Tebby. Sadly, although early test drivers had been received by the show, they did not yet work well enough for Qubbesoft to demonstrate. Phil has also collaborated with author Jonathan Hudson on a little novelty programme called Q-Eyes, which emulates similar software on other computers, where a pair of eyes follows the cursor location around the screen. Given that the higher resolution modes on Aurora, QXL and QPC make the pointer look quite small on screen, it can be easier to lose track of where it is lying, so the moving eyes direct you to it. It is also a fun little application which caused a great deal of interest and laughter among those who saw it [see *Q-Eyes item elsewhere in this issue - Editor*], especially when the author moved the pointer between the two 'eyes', making it look cross-eyed!

Robin Barker of Di-Ren turned up during the day and although not actually selling products, he spent most of the day helping other users with their hardware problems.

Quo Vadis Design had their complete range of software on display, and were kept busy during the day demonstrating their programmes and supplying updates. Following the recently announced death of Ed Bruley of Care Electronics, questions were asked about the availability of the Tony Tebby applications (QPAC1, QTYP, QPAC2 etc) and Zitasoft applications (Sidewinder, 4Matter etc). Bruce Nicholls said that the Tebby applications are now distributed through Jochen Merz, while the future of the Zitasoft programs is uncertain until the author

concerned, Steve Jones, can be contacted. Quo Vadis is also now apparently the only source of Italian software house Ergon Development's software. The recent releases from Belgian software house PROGS were also available, including the revised Font Utils mentioned above. It is hoped that a new Prowess based version of Line Design may be available soon. Although the number of authors writing Prowess based applications is not very large, PROGS themselves are actively producing software to use Prowess.

Bill Richardson was present with his popular range of Z88

computers and peripherals, and his stand also contained a number of goodies such as floppy disk drives, monitors, microdrive cartridges and a printer interface. Bill had apparently sold out of QL monitors at the show, yet another trader who appeared quite happy with his sales there.

The TF Services stand was dominated by a Lego helicopter controlled from a QL via a Minerva Mk2 interface. Tony Firshman now has a large range of peripherals for this interface, making it relatively easy to interface powered applications via the range of relay switches, temperature sensors etc. Someone suggested to Tony by the end of the show that he

should consider making a parallel printer interface or a serial to parallel converter to hook onto the I2C bus, and he promised to look further at these ideas. Tony ran a series of talks from his stand (his son must have told him not to dare to move the helicopter!) about Minerva and SuperHermes.

The Jochen Merz stand seemed constantly swamped with customers, who kept Jochen busy supplying the new QPC and other software. News on QPC is that a new Windows 95 installation procedure should make it a bit easier to use QPC on a PC equipped with Windows 95. Hopefully, the brisk



Terry Harman tackles a hardware problem at the workshop

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trade on his stand would have taken his mind off the injuries he received after falling on the stairs as mentioned above - with luck, no permanent injuries we hope, Jochen.

Quanta, of course, had a stand at the show, with head librarian Vic Avery and quality controller John Gregory in attendance. Chairman Roy Brereton and treasurer John Taylor were also there, along with current editor, Phil Jones.

During the day, several talks and lectures were presented. Roy Wood himself chaired a discussion on the relative merits of QXL versus QPC, while Jonathan Hudson showed why he is considered THE QL expert on the subject with a talk about comms. Ron Dunnett gave a talk about Aurora and his other products.

One corner of the main room was devoted to a bring-and-buy area, manned by local group members Keith Mitchell, who is well known in the area as someone to approach for help with repairing monitors and other hardware, and John Roberts. The stand seemed to be quite busy all day, with all sorts of useful QL and Z88 gear popping up from time to time, and many users took advantage of the opportunity to buy used products at low prices. A few hard to obtain products seemed to pop up - there was even an old SPEM video digitiser on sale which seemed to disappear almost before anyone had a chance to spot it!

If, after reading this show report, you decide you'd like to attend one of these workshops, why not keep an eye on the Show Dates column at the back of QL Today for details of a workshop in your area. Even those organised by Quanta are not exclusively for members of that organisation, and everyone is very friendly and helpful at these events.

The Eyes have it...

QEYES by Jonathan Hudson

Dilwyn Jones

Ever felt you're being watched? Now your QL can have that feeling too! Having seen a similar program on his Unix system, Jonathan Hudson had a burst of inspiration on a train journey and wrote this amusing little program, which QL Today has been allowed to distribute via our cover disk with this issue. Quite simply, the program draws a couple of eyes on the screen which follow the pointer arrow around the screen. This is useful in two ways - it provides a visual guide to the pointer position on the larger, more cluttered displays now possible with hardware like the QXL and Aurora, and perhaps more importantly it offers a little light relief, that is, it's fun! As it's designed to follow the pointer position, naturally it

needs pointer environment.

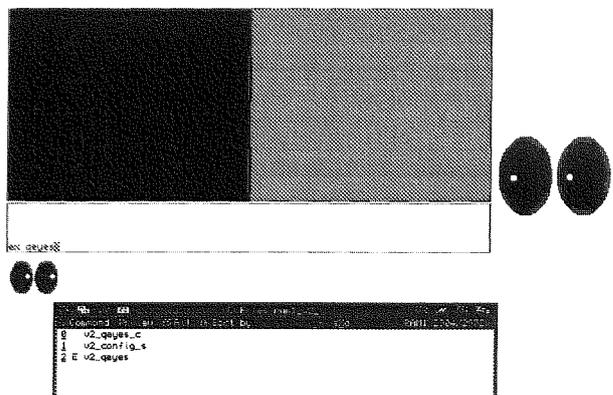
I first saw the program at the Hove Quanta workshop, where Jonathan innocently had it displayed on his laptop screen, little suspecting how much attention it was going to attract! Jonathan wrote this program at the end of 1996, and Phil Borman hacked the original source to produce an enhanced version for SMSQ users. Jonathan's original version has a fixed size window - the screen dump shows both programs - Phil Borman's version is the larger pair of eyes.

There are two versions, which can live in the button frame or in their own windows on the screen. In the latter case, they can be moved around the screen and positioned in an unused area so that they continue working whichever program you use. In practice, they are written in a way which does not occupy much CPU time, so they have a negligible effect on system speed. They have a config block built in, so you can specify where they appear initially on screen. The programs are written in C68, and the source code is included, so you can see how it was written, and if conversant in C, you may like to tinker with the source code to create your own custom Q-Eyes! The program is freeware and may be freely copied for other QL users.

Hitting (i.e. pressing the left mouse button) the 'eyes' brings up a standard 'Move' sprite, so you can shift the eyes to another part of the screen, useful if you find the program covered by a program you have just started.

Sadly, I could not get Qeyes to function in MODE 8, the program would draw the eyes, but the pupils which follow the pointer movement are not drawn. I'm not sure if this is a bug, or if it was not intended to be used in MODE 8. Not a great loss, since the majority of programs currently available run in MODE 4, with the exception of graphical applications.

The pointer sensing is quite good - the eyes manage to follow even quite rapid pointer movement without getting confused. If you like making it suffer, move the pointer between the



eyes and watch it go cross-eyed! The program is multitasking and provided it is not buried under another program's windows, will keep moving and watching the pointer position even if the pointer enters another program's windows. It can be quite amusing to start a copy of both versions and watch both follow the pointer movement, like a parent and child!

Version 1 of qeyes is only about 7kilobytes in length, while version two is about 10 kilobytes.

The program is supplied in Zip file format on the disk to reduce the space required. Its filename is 'qeyesTODAY_zip'. Simply start the Unzip program with an EX command with the DATA_USE default set to the drive where you want it installed. Unzip will create three sub-directories called orig_, v1_ and v2_ containing both versions of the program, and a README file containing brief instructions. For example, with the cover disk in FLP1_, and a blank, formatted disk in FLP2_, enter these commands:-

```
DATA_USE FLP2_
EX FLP1_UNZIP; 'FLP1_qeyesTODAY'
```

Problems and Hurdles In Communications

Ian Pizer

I have used for some time a screensaver written by Thierry Godefroy which is flexible, easy to use, and after the screen has been blanked it can be retrieved by hitting a key OR moving the mouse. It is included in my boot and produces a pretty window in which you choose to activate the saver or put it to sleep or kill it. This becomes tedious after a few hundred boots so I asked Thierry if he would modify it so one could fix the choice and avoid the hassle of choosing each bootup. Thierry made this change and sent me the program via Compuserve.

Compuserve cannot handle mailing of binary files so Thierry had encoded it with UUencode program which I think does the following: after each 6 bits it inserts 2 more bits to form 8 bits representing an ASCII character. So the binary file becomes a list of characters which Compuserve can mail. Decoding does the reverse. So the first hurdle was to find the decode program UUd. I searched BBs and found them in the ERGON BB list. Next hurdle, my system (QL and QTPI) would not connect to ERGON (mysterious bug not yet resolved). After many e-mail messages Davide Santachiara of ERGON suggested to look in the

C68 file area of a BB (Bulletin Board). So I found the files 421arun3_zip and 421adoc2_zip in the Nene Valley BB which I was able to download. When unzipped there were many files but the two I wanted were there and called UUE and UUD!

I then decided to do some research - I encoded a zip file with UUE. To encode the file WIN1_xxx I did this:

```
EX win1_UUE;'WIN1_xxx'
```

Which made WIN1_xxx.uue the encode file.

Then I sent it to myself on Compuserve, read it back from Compuserve, and decoded it with UUD, with this command:

```
EX win1_UUD;'t ram2_ WIN1_xxx.uue'
which decoded and put the file in ram2_.
```

Then I unzipped it and the result was correct. This gave me hope for the next stage.

Back to Thierry's mail I eliminated unwanted lines, and Control Codes which had been inserted by the QTPI log file (using the editor QD). I decoded with UUD and got the zip file of the new screensaver. I unzipped it and there was scrsav14! And it does exactly as asked - thanks Thierry.

Before the above success, Thierry found I was in trouble so he put the zipped version on his site on the WWW and I was able to download it into a mainframe system in my old organisation; but due to several further hurdles I have not been able to get it into my QL by that route.

Thus ends my story. Experts in communications who read this will no doubt wonder why the fuss, but as a non-expert it was not easy. You might imagine that snail-mail could be quicker and less stressful than decoding, unzipping, and the various hurdles. But I have learnt a great deal despite the suffering en route. BBs and e-mail and WWW are here to stay and open up a new world.

QL (or Aurora?) forever!

PC Viruses and QPC

We had a small number of QPC customers who reported problems with QPC which we never thought could happen. A genuine original disk was not recognised as an original, although the instructions were followed step by step through the manual and on the phone as directed.

The customer got a new disk, and the problem did not disappear. The returned disk, however, revealed after examination, that it contained a virus. Therefore, if you find similar problems with QPC (and/or the QXL software) or other startup problems, please check your PC with recent anti-virus software. Bad news, but this can happen if you use non-QDOS (or SMSQ/E) systems.

Device name and usage

Jochen Merz

The idea for this small extension came up at the last Eindhoven-QL-meeting. Before I get on to the toolkit, let me quickly mention the show: although it was announced in QL Today, next to nobody seemed to have remembered it. Unfortunately, we did not send out a mailshot, so non-QL Today readers did not know about it. Other circumstances made sure we did not have very many visitors: fog from Germany to Eindhoven in the morning, the fact the Carnival started plus the beginning of holidays and sure it was a fairly quiet meeting. Seems we know what we have to do to make sure the next meeting will be as good "as usual".

At least customers did not queue at my stand as usual, leaving enough time to sort out questions and problems in peace with various customers.

This led to the question, if we could have a function which returns the current setting of FLP_USE, WIN_USE, RAM_USE etc. Instead of adding a function for each device, why not let us have a function which can be used for every device, I thought. Plenty of time, the function was written in 15 minutes or so, and here it is. Fortunately, with the cover disk being able to distribute the binary, there is no need for you to type it in and assemble it yourself. I save the printed space here and put the source listing on the cover disk (DEVNAME_ASM), and, of course, the assembled version for those without assembler.

The function will be DEVNAME_USE\$, expects a parameter like WIN or DEV and returns the current USE-name, which is WIN or DEV unless you re-defined it using WIN_USE or DEV_USE. If the device does not exist in your system, an empty string is returned.

Example:

```
FLP_USE f1p:PRINT DEVNAME_USE$('f1p')
returns
FLP
```

```
FLP_USE mdv:PRINT DEVNAME_USE$('f1p')
returns
MDV
```

Please note that this function will work only on SMSQ/E.



Letter-Box

Parallel Printer Ports for Quill

In issue 5, we asked if anyone knew why printing to _PAR in response to the print destination query in Quill produced the "Overwrite?" query. We have not received an explanation for that problem as yet, but Ron Humphries wrote to point out that if you use INSTALL_bas to install a parallel port with the name "PAR", this prevents the problem from arising in the first place, since you don't need to enter _PAR in the first place each time you print. Thanks for that little hint, Ron. Remember, though, that with some early versions of Quill's INSTALL_bas, you had to use the port name "2PAR" in place of "PAR", for unknown reasons.

After some trial and error in trying to establish what is happening, I discovered that under some circumstances, a parallel or serial port can appear to software as a very high capacity disk! Turbo users, try doing a DEVICE_STATUS on a serial port, for example. Therefore, it does indeed look as though Quill thinks that "_PAR" is a file, tries to delete it (you can't, of course, delete a serial or parallel port!) and all proceeds normally from there.

Question: After installing a floppy disk drive in the tower case, it no longer works. Why could this be - would it be a power supply problem, for example?

Answer: Answer, from Ron Dunnet. The screws used to affix the drives in the tower case enter the body of such floppy drives, so you have to be careful about the length of screw used. In this case, the screws were touching something inside the floppy drive, and shorting it to the metal carrier inside the tower case. Using shorter screws, or a washer or two on the screws to reduce the effective length, cured the problem, and fortunately no damage had been caused.

Falkenberg Harddisk Query

John Gregory and Vic Avery discovered a potential problem with a Falkenberg Hard Disk system. After attempting to delete the contents of several sub-directories with the WDEL and WDEL command, seemingly with success, they found that after switching off the computer, the files were in fact still present. In fact, without actually reformatting the hard drive, they found it impossible to delete the files. So how could they actually delete the files?

The answer was eventually supplied by John Hall. This hard disk system includes a command



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called WIN_FLUSH. What seemed to be happening was that although the drive map was being updated in memory, so that it looked as though the files had been deleted, it was necessary to issue a WIN_FLUSH command to force the map to be written out to the hard disk, thus completing the wildcard file deleting.

QPC HINTS AND QUESTIONS

Peter Tyler, Aughton, England

First of all, I had no problems installing QPC, but I had to dig around in CONFIG.SYS and AUTOEXEC.BAT to create the front end menu necessary to give the choice of QL or PC/Windows. This meant looking things up in the appropriate manuals and HELP facilities because the examples given in the PC manual bore only a passing resemblance to the entries I started out with in these files. I am afraid the problems encountered here for PC novices will be the first stumbling block for many *[tell me about it! - Editor]*. It is quite easy when you know how; I even had the mouse going in no time at all. However, it is a good idea to use the :GOTO END jump at the end of each block in AUTOEXEC.BAT, with :END to finish up the file. If you don't, then when you exit from Windows, the directory changes to QPC and there is an attempt to load it with all the wrong settings.

Isn't it a pity that we only see the rather nice QPC screen during installation? Wouldn't it be nice if it appeared during bootup, or as a screen saver perhaps?

Some of the "Toolkit" facilities apply to the more peripheral hardware such as disk drives, or the keyboard front end. It is not surprising, therefore, to find that some of the commands included and referred to in the manual do not work in the PC environment. The first of these encountered was the WIN_USE flp facility. To get something going quickly, this command would have been useful. However, once you have got your required programs configured for the hard disk, this command is one you would not miss.

This is a general QDOS problem: the devices are in a fixed order: DEV, FLP, RAM, WIN. And, they are searched in this order. Therefore, if you rename WIN to FLP, the "real" FLP is found before it comes to the renamed WIN. Rename FLP to something else (e.g. XXX) and it works.

Far more important to me is the fact that ALTKEY together with the direct command ALT+ENTER, does not work: presumably because there is no longer an accessible keyboard buffer?

The lack of this facility, which I use in my BOOT files, is so important to me that I shall not be able to put the QL away, in favour of QPC until a way around it materialises.

Add HOT_GO at the end of your BOOT and it will work. We have not added an explanation of the HOTKEY System II, the Pointer Environment and the Window Manager because 98% of the customers are familiar with it. The documentation is separately available from JMS.

The PROG_USE etc. default settings are not held when the PC is switched off (not on the QL either), so they need to be set each time in a front-end BOOT. They default to FLP1_ without this. Now come on somebody - is this version of SMSQ/E for QPC or what?

The settings always default to FLPI_, but where's the problem setting PROG_USE and DATA_USE in your BOOT file as on every other system? This is QL-compatible!

I had problems with the Quill and Abacus opening screens - I still have the "as supplied" BOOT as part of my more elaborate boot for sentimental reasons - because I notice that when you CLOSE a window channel, it clears the window as well. Probably an improvement in SMSQ/E vis-a-vis QDOS. Apart from this, my Turboed QUILL would not load (not surprising really), and whereas ABACUS would, the frames round the information boxes were missing. Curious. PDXchange ran OK, but again the frames were missing.

TurboQuill does not use the screen driver, and the boxes are poked directly into the screen memory. This means, that these versions will only work in STARTING resolutions 512x256 pixels. Use the new XChange instead - it will do proper graphics (even Easel graphics) in every resolution, and it is fast 'cause the new screendriver is fast anyway.

The screen base is now at 266912 (must remember that number), so programs which write data directly to the screen will stumble with this. One I use occasionally is PAINTER which LBYTES all its screens direct to 131072. I don't know how many programs will fail for this reason, but I have certainly used this scheme on some of my utilities.

You should use the built in SMSQ/E extensions to check the screen details if for some reason you wish to POKE directly to the screen area. The start address of the screen is found with the SCR_BASE function:

```
LET base_address = SCR_BASE(#0)
```

The width of each pixel line in the display is returned by the SCR_LLEN function:

```
LET line_width = SCR_LLEN(#0)
```

There are also functions to check the width and height of the current display. You should always use these rather than assume the screen will be at a particular location in any given display size or mode. Also, do not assume that the line width in bytes is equal to the pixel width DIV 4, for example, as this will go horribly wrong on the Aurora for example!

I cannot get Taskmaster to RUN. I thought this might be a way of accessing TurboQuill.

Can anyone help with this? It seems a bit strange to us that you might wish to use Taskmaster at all, since it is not required with pointer environment plus QPAC2. If anyone knows how to make Taskmaster work in this setup, we would be glad to print details.

Now to the CD player feature. First the command line EX FLP1_cdplayer.bas does not work for me, although LRUN FLP1_cdplayer.bas is OK. I can guess why and it's unimportant anyway. Far more important is that having got the program going, everything works OK except that on opening the door and then closing it again, a severe lockup of the PC occurs. You can only get out of it again by using the hardware reset of the PC. Because of the lockup this problem took a long time to sort out, but the solution may be of help to others who have this kind of problem. After closing the door, other than the first time, either with the commands or manually, the player seems to need its cage rattling. If I do this sequence without the help of cdplayer.bas, I find that the then subsequent use of CD_PLAY does not work, but a second use of it does. Almost any of the other accesses to the player as a first command will do - perhaps CD_STOP is the most obvious - but CD_INIT won't do. This gives me a clue to a solution for the cdplayer.bas program. Here the cause of the lockup is in line 1470 where the first call to CD_TRACKSTART returns 0, whilst the second one on this line returns the correct value of 544 from the CD I was using. The result of this is that the line is being asked to evaluate a negative number, and the rig most certainly does not like it. The solution for cdplayer.bas is to change line 2190 to CD_CLOSE:CD_STOP. Inclusion of this extra command will have no effect on users who do not have this problem.

Only bas Extensions will be executed as SBASIC programs, not .BAS Extensions!

Finally, the QPC manual. I know this is a difficult subject; it may mature a little, but there is no likelihood of anyone writing a definitive book on QPC. The SMSQ/E section is written in a style which compares the new with the old. This means that one has to be very familiar with the old in

order to use QPC as a whole. This will be very discouraging to anyone new to the QL, or someone who had lapsed for a period. Or are we not expecting a rejuvenation of users? What I am saying is that the manual is not self-standing. The Jan Jones BASIC book cannot be all that irrelevant and is available. The basic Toolkit 2 documentation, however, is somewhat difficult to obtain now, and a user's copy may be significantly out of date anyway. Could a Toolkit 2 manual be published separately, if a self-contained SMSQ/E manual is out of the question? The same applies to the various parts of the pointer environment; perhaps more so since there is only a passing reference in the QPC documentation.

At the moment, we are not aiming at customers outside the QL-world, mainly because of the fact that the documentation comes in pieces and assumes that users own, for example, the QL User guide. A new manual for users outside the QL scene is being prepared at the moment, which has to include parts of the QL User guide, Toolkit II, Hotkey System II, Pointer Interface and Window Manager and the SMSQ/E features. However, this is a lot of work and adding this to QPC would bring up the price considerably, and why ask people to pay a lot of money for something they most likely already got? This book, when ready, will be separately available.

Geoff Chappell, Leeds, England writes:

I mentioned the SMSQ/E system on the 'phone and you will see several references to it in this edition but they are, in the main, comments which are attached to advertisements and are not *explanatory* comments such as I need. Maybe they would sell more if they went to the trouble of explaining what the system does - to people (such as me) who have either forgotten what they first read about it, or who didn't bother to (or couldn't) take in enough information when they first read the initial article.

I think that similar comments might be made for QXL and QPC; in my experience it is a common fault on the part of contributors to QL-Today and Quanta etc, to take for granted that the reader understands all of what *they themselves* understand. Even "prepare a boot file" can cause consternation in my mind but I suppose the person writing the article does not have time for the rabbits of this (computer) world and that is why I never write in to the Editor - I would be expecting, in showing massive ignorance, to make a fool of myself by asking a stupid question.

No question is stupid - Editor.



John Ree, Reading, England writes:

I duly received the copy of QL Today referred to by Geoff Chappell, and notice an article therein under the heading of 'QL Today Survey' in which you state (re. the 'beginners' articles) "some readers commented that they could not believe that there were still QL users at this level".

This sort of comment is well calculated to make my gorge rise! Not only is it intellectual snobbery of the worst kind, but it is totally counter-productive if we are to stand any chance of retaining the interest of the dwindling band of QL *aficionados*, let alone to gain converts. And this in turn may adversely affect those few traders who still rely on the QL for any part of their income, and who may well have to increase the prices of their products as the market for them declines. If indeed they see fit to continue in this market at all.

Geoff Chappell's letter [*editor's note: Geoff and John are QL friends who had corresponded before submitting the letters to QL Today*] sums up one man's feelings better than any words of mine could do, and I must say I entirely agree with his sentiments.

In case any of your readers should suppose from the above remarks that I myself must also be a complete 'rabbit', I would just say that I worked my way up to the QL via a ZX81, followed by a 48k Spectrum (on which I wrote several programs, mostly in BASIC but with odd bits of Z80 machine code thrown in), and then a 128k Spectrum +2 with Plus-D disk interface, after which I progressed to the QL, for which I have written another program (which, as you may recall, was published by DJC). But I am still very well aware that by no means do I 'know it all', and I take leave to doubt whether so many others do either! So by all means let us have more articles for 'beginners', please, and then when they become expert through reading them - who knows? - they may even be able to write articles themselves!

[Another way to learn programming is to type in programs from a magazine such as QL Today and to try to follow their construction. I, for one, was sorry when QL World ceased to include such programs, because I think I learned quite a lot that way.]

And in regard to SMSQ, I too would greatly appreciate an article about this, starting with what (if anything) the letters 'SMSQ' stand for, and continuing by describing (preferably in words of one syllable so that even an idiot may understand) what SMSQ *is* and what it *does*. The most I have been able to glean is that it is an 'operating system' of some kind, but although the 'intellectual snobs' mentioned earlier seem to bandy the acronym about freely enough, none has yet (so far as I

know) described it in any detail. (Which causes me to wonder just how many of them know either!!) I always thought the QL had already got an operating system called QDOS, which is resident in ROM. How does SMSQ coexist with this without a fight? And if SMSQ is indeed an *improved* operating system, why is it not also supplied on ROM? Or is it? I believe that the Aurora graphics card requires that a Sinclair or Minerva ROM to be fitted in order for it to work at all, but then it apparently uses SMSQ. Is it any wonder that I feel so utterly confused?

I hope that the above questions may give you something to get your teeth into!

Editor's reply: It became obvious from the reader's survey that there beginners, advanced users and intermediate users reading QL Today, and all would fight to preserve what they see as their level of competence in QL Today. We are happy to try to provide what readers want, but it does depend on the contributors to some extent. If beginners feel that the magazine doesn't cater enough for them, write to tell us what you'd like to see covered (as John has done). Or feel free to write to us with questions on any subject for us to try to answer, or if we can't we'll try to get someone else to answer them for you. Readers seem to dislike long listings such as the games I wrote in an earlier issue, though the shorter listings such as useful procedures or functions seem to be popular. One of the joys of typing in listings is that they rarely work first time, so you then have to spend a long time going through it all to find your typing mistakes. Occasionally, an unforeseen 'feature' (OK, a bug) will creep in, just to add to the fun. The point is that trying to find these errors and correcting them is one of the best ways of learning to program in Basic. I always find it interesting to read about other people's systems and their computing histories, and many readers have told me they like to read them too, as they always seem to contain some information you didn't realise you didn't know. See Dominic Lester's account in this issue for example - I didn't know much about the Smash program. SMSQ - Perhaps Jochen or Tony Tebby will write a fuller account for the magazine, but briefly, here is my contribution: SMSQ can stand for Single-user Multitasking System or Small Microcomputer System (for the QL) or ... Ignore anyone who claims it stands for Silly Microcomputer System (Quaint). Must be a PC user. John is right to assume it is an operating system. The difference is that not only does it correct many faults and shortcomings in the original ROMs, it is

☞

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"From The Nurse Helping To Keep The QL Alive."

600

completely rewritten to bring it bang up to date and has added many new facilities. Apart from the version supplied with the QXL, it includes built in pointer environment (equivalent to the files called PTR_GEN, WMAN and HOT_REXT you get with some programs). The operating system basically controls the computer and supplies a whole lot of routines that machine code programs can call. SMSQ is (in theory, anyway) transportable and could be ported over to other computers. This is what happened with QPC which to some extent is SMSQ/E (the E stands for extended environment, which means it includes the equivalent of the files described above) running on a PC without a QXL. On the QL, SMSQ/E loads from disk (or hard disk) after the QL has started up, replacing the original operating system after it has loaded. The operating system now lies in RAM, and has, to all intents and purposes, just disconnected the old ROMs. SMSQ is a living operating system, it gets updated all the time, so supplying it on ROM or EPROM would not really be worth it as it would quickly be out of date. There is also the problem that it is bigger than the old 48k ROM operating system, and the QL's design means that only 64kilobytes of ROM space is available in the part designated for the operating system. The fact that SMSQ and SMSQ/E start from disk (or hard disk) also means you can choose which operating system to use. If you are a software writer, for example, who wishes to test that a program runs on both systems, this makes it easy for you to choose which system to use. Advantages of using SMSQ over QDOS are that Sbasic (the enhanced version of SuperBASIC) runs very much faster than the old SuperBASIC, SMSQ reads both QL and PC formatted disks (though obviously you can't run PC programs on the QL), you can run several SBASIC programs at once (like using several executable programs on a QL and switching between them), and everything generally works better and in most cases faster. Compatibility with older QL software is quite good, Tony Tebby put a huge effort into this, and now very, very few programmes fail to work under SMSQ/E. It is important to note that although the extended pointer environment is part of SMSQ/E and QPC, QPAC2 is not included. Most pointer environment users would regard QPAC2 as an essential accessory and indeed it works perfectly with SMSQ/E and gives you file handling menus, job control menus and so on. The Aurora card requires that a Sinclair or Minerva ROM be present to start it running

initially. Aurora will in fact work at a basic level without SMSQ, but you can only use the smallest screen modes, since the original operating system did not allow for the screen to be any size other than the original QL 512x256 screen. So to allow for the use of better displays, SMSQ/E is needed, since this is the only operating system whose software drivers provide for the better displays, which is why SMSQ is supplied with a QXL, for example.

■

The Lonely Joker

Reviewed by Mark Knight

Introduction

The Lonely Joker (LJ from now on) is a multiple card game for the QL and compatibles, providing six different games. These include the classic version of patience that I am most familiar with (Echelon 3) as well as a number of games I have seen nowhere else. This type of solitaire card program is available for almost any computer you care to think of, from the BBC micro and Sinclair Spectrum to the latest Apple Power Macintosh computers and it is good to see the QL joining the ranks. If you are not keen on card games this sort of program may not interest you, although I am not a card player and LJ kept me busy for some time.

First impressions

The first thing I did upon receiving the program was to read the manual and then back up the disk. The manual is clear and to the point and it took little time to install LJ on my hard disk and start running it. I should emphasise that a hard disk is not needed but if you have one you will have no problems persuading LJ to use it. The main executable file is over 170k, a fairly large program by QL standards, but this is testimony to the work that has gone into it and the vast amount of data in LJ becomes obvious when you start playing the various games and variations.

I tried the familiar game first just to get a feel of the program and I was immediately impressed. LJ is obviously efficiently programmed as it responds instantly to commands. The graphics are well designed and the cards move quickly and smoothly about the screen, faster than many games I have tried on computers theoretically much faster. This is partly due to the QL operating system being more efficient and partly due to smart programming by LJ's author.

In play

The program runs in the Pointer Environment (which is provided) and it is best played with a mouse, though during the review period my borrowed mouse packed up and I had no trouble playing the game without one. Clicking on a card, the pointer turns into a hand holding a card and when it is in the correct place another click or keypress dumps the card in the new position if the move is allowed. Like all good computer card games LJ does not permit cheating and attempts at illegal moves in any game are met with a beep and no other response. This encourages proper play and enhances the challenge if you were ever tempted to cheat when playing with real cards.

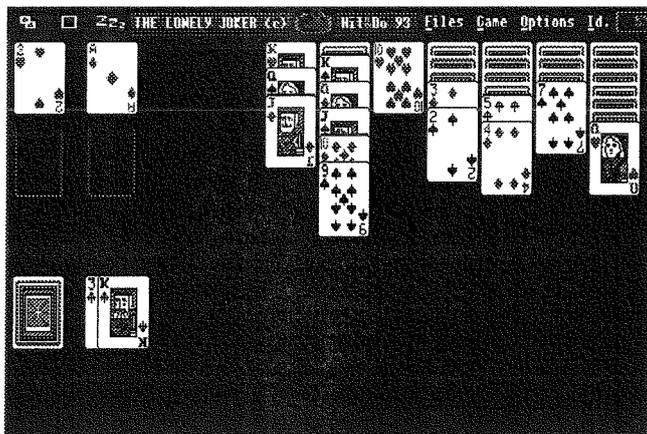
I was not expecting to be impressed as I more or less gave up playing with real cards years ago, but I found myself spending excessive amounts of time with LJ in the first week or two. A sign of the program's addictive nature was that I soon realised I was spending too much time playing the game and not enough writing about it (so much so that this review is the most delayed I have ever written). LJ really does have that "one more go" feel to it that makes you want to try again. Because it is so quick to respond and so neatly designed the program never gets in the way and you can concentrate on playing the games you know or learning those you don't.

There is a good variety of games here too, very varied in how difficult they are, so the program should provide a genuine challenge to most people for some time. I barely begun to learn some of the games in the review period and did not succeed even once with some of them, though this was partly due to repeatedly playing some of the easier ones (nothing like being lazy). For the record the games are Echelon 3 or Echelon 1 (two variants of the same game) Crapaud, Napoleon, Cascade, Spine and Four-in-the-hand. Some of these may be familiar to readers under different names and only a very keen card player would recognise all of them. Learning the new ones is likely to be part of the fun for most buyers.

Special features

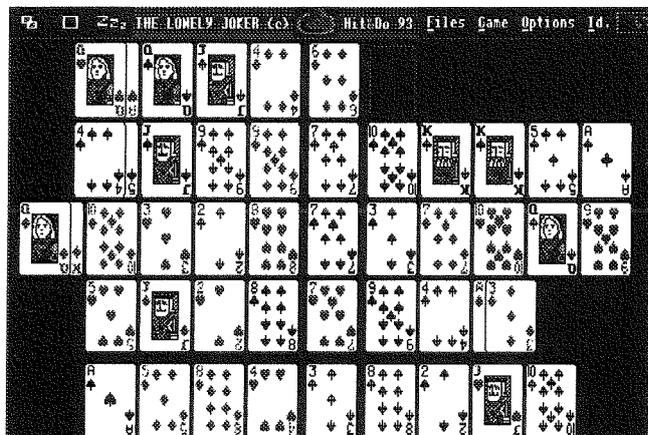
One excellent feature is the ability of the program to finish games automatically, moving the cards about at lightning speed once a certain stage

is reached. This automated finish does not work when there is still doubt about the outcome, but saves the tedious stage at the end of a game when the cards must be shifted about routinely while the game is effectively over. I liked this, it removes none of the challenge but saves time so you can get on with the next game (or get on and write your latest software review).



Another good facility is the way some card movements can be carried out with a single click of the mouse or a simple keypress, the left and right mouse buttons or the ENTER key or SPACE bar serving different functions when clicking on a card. This is consistent throughout the program so it is simple to master and works well. Little touches like

this make things easy and don't get in the way of users, showing that thought and care have gone into the program. Moving the cards soon became instinctive and I was able to concentrate on learning the new versions of patience rather than struggling with the program. Great stuff.

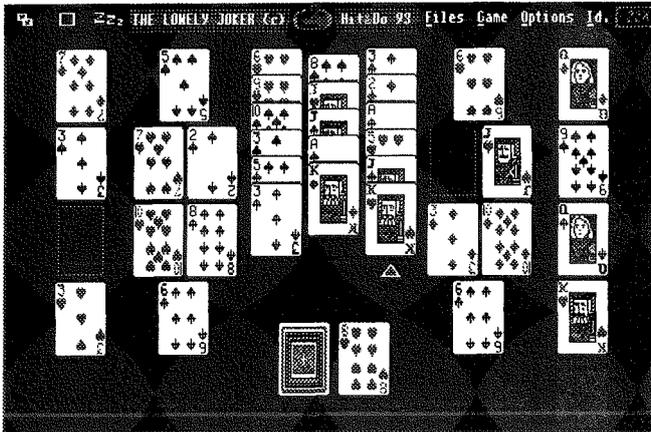


Documentation

Fortunately there is little to say about the manual. It is pretty clear on how the program works but a little confusing when trying to explain some of the game variations. To be frank it is hard to see how some of them could be explained much more clearly as two of the games are quite complex. I did manage to learn using persistence and by keeping the manual handy. It was good to see plenty of screen dumps as these are much more helpful than reams of text or the poor diagrams used in a lot of manuals I have seen.



The one criticism that applies to every Pointer Environment program I have seen and that is that the manual assumes you know all about the Pointer Environment. Some explanation would be helpful in case The Lonely Joker is your first pointer program (even if it was just a reference to a standard Quill document on the disk). There was also no explanation of how to install the program or move it to a device other than the floppy disk it was provided on, and with hard disks become more common on QL systems this would be sensible.



Conclusion

I think The Lonely Joker is very good indeed and the various games could keep most people going for a long time. Some of the variations are easy to learn and might be mastered in a few days or weeks, but others will probably take longer to learn and ages to master - and I mean months or years. This allows you to buy it confident that you will still be able to use it to while away some spare time long into the future. The program has an excellent feel and works smoothly and quickly at all times, showing it is well programmed and well designed. If my own experience is anything to go by you shouldn't buy it while you have urgent work to do on your QL or the work is unlikely to be done by the deadline!



My QL System

Dominic Lester

I have had a QL from its launch and have used it ever since. I joined the increasing number of QXL users a while ago and have not regretted the decision in any way.

This is just a list of items I use from day to day and I feel they deserve crediting. On the hardware front, I wanted to 'tart up' my old QL by using an old PC

case. Unfortunately, a Trump card (new to me) on the end of a QL seems much longer than the Gold card ever did and they certainly were not going to cram into any case I know of. After I spoke to Tony Fishman he convinced me that 'Qplane' was the answer, rather than a ribbon connector I had asked Ron Dunnet for. This small and efficient piece not only provides three main bus expanders but also consigns the old QL 'brick' transformer to the bin, since it connects directly to any PC power supply! Both the above gents gave enough information for even a man of my limited electrical experience to succeed. To complete the scene I added the Di-ren keyboard interface without any problem at all.

On the software side I use SPY for word processing and re-doing programs. I read the recent review in QL Today and must add that my overall impression is far greater. For two years I have used the SPY on a QXL with a nearly full EGA screen. I merely altered the screen parameters on the sheet provided and the only side effect is that the 'error menu' stays around sometimes which can be easily removed by holding left arrow.

My favorite pointer program has to be QPAC 2 because I use it all the time and would be lost without all the hot_keys. FIFI is a fine companion especially when lost as to which subdirectory I copied which floppy into. Even my new basic listings run better due to QMenu which makes even the shortest program use a neat pointer.

With the inevitable mix of PC discs creeping in these days I find DiscOver and TextTidy very handy. Sbasic can do a lot of file changes I used to think required serious machine code. An easy 'ex' of one of the channel 0 and 1 'filters' allows me to strip out any template characters, shorten lines and printouts all in one go. Having written a few things on my QL last week I now appreciate how blindingly fast Sbasic is!

GOban is one of the few games I play on the QL. I grabbed this off J.Merz's QBOX 2 and I am thrilled it has been ported to the QL. Being a smug kind of guy I have to point out that I need to give the computer a large handicap to get a decent game.

SMASH is an extremely useful program that almost halved GOban with no side-effects. I can compress any executable file but does seem to need SMSQ or similar to work (i.e. does not work on my JM Rom anyway).

I would like to make a couple of requests. Will there be a program to load old screens into all these new larger resolutions which are appearing. My old Mandelbrot screens have to stay on the QL. Secondly I no longer use my 'smiling mouse' because it does not move the PE pointer despite simulating the cursor keys; i.e. where does QPAC 'peek' to check for input?

In QL Today I have to say how much I enjoy the Ads as well as the articles since it gives an insight into the QL's future health.



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News

Major improvements happened to QD and QMENU. Prices are given in the next column, some details of what has changed can be found in the NEWS section of this magazine. News are highlighted in **bold**.

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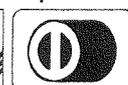
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A few SUGGESTions

Geoff Wicks

One of the recurrent themes throughout the life of the QL is that of one or more experts making a definitive pronouncement that something was impossible or impracticable only to discover that some time later someone had done it. We have been told with detailed technical arguments that the Trump Card was the ultimate expansion; that a faster processor than the original 68008 was impossible; and that high resolution screens and more colours would be unattainable.

Most of these predictions applied to hardware, but there have also been examples on the software front. It is only a year or so ago that people were saying a software emulation of the QL on a PC would be impossible. I have a sneaking pride in knowing that two top QL software authors had asserted that there would be absolutely no demand for a QL-Thesaurus. Nevertheless I was wrong

about spellcheckers. Two years ago I wrote in QReview,

"If you are one of those users who would like the spellchecker to come up with alternatives for a misspelt word, do not expect the QL to be as sophisticated as some PC spellcheckers. Two "giants" in QL wordprocessing have indicated that the hardware available to the average QL user does not permit the same sophistication."

A year later along came Lester Wareham with his public domain spellchecker "SUGGEST" to prove us all wrong.

Recently I have been writing a Dutch rule file for SUGGEST, and this article is intended to encourage others to do the same for their own language. I also have some interesting news for Perfection users, and will finish the article with answers to two questions I am often asked at shows. But first a general description of spellchecking on the QL.

Controversy:

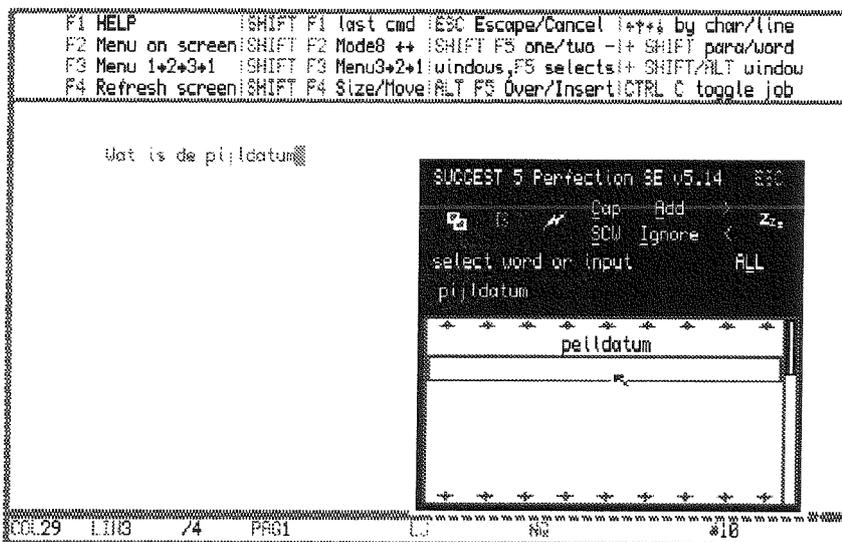
Spellchecking is more controversial than you might expect. It is an area where people have strong personal preferences. There are some who argue you should not need a spellchecker, but should learn to spell instead. Others will say this is an elitist argument. Some users want to check a document when typing and want alternatives for misspelt words, but others want to check a document after completion. Some users want as large a dictionary as possible, whereas others argue smaller dictionaries are better. A spellchecker has to cater for many different users.

The QL has three commercial spellcheckers, Spellbound, QTYP and DP's Spellchecker. As I have no experience of Spellbound I can compare only the last two of these. In my opinion QTYP is

the better spellchecker for general use. It can be linked easily to other programs; it supports words containing accents and umlauts, which Spellchecker does not; there is no limitation on the lengths of words as in Spellchecker; its dictionary compression appears to be more compact; and it gives

some help in suggesting alternative words. Having written this I have to add I am an enthusiastic user of DP's Spellchecker, because it beats QTYP for my style of spellchecking, which is checking completed documents in Perfection where the speed and clarity of the marking of misspelt words is first rate.

QTYP's suggestions for alternative words are limited. Should you make a spelling mistake, you can view the dictionary and scroll through this until you find the correct word. If I type "grammar" instead of "grammar", QTYP will make no suggestions. I have to delete the last two letters to get a root of "gramm", when seven words are displayed starting with "gramm". If I had typed "suprise" instead of "surprise", I would have to go back to a root of "su" and scroll through over a hundred words to find the correct spelling.



Over the limits:

SUGGEST overcomes the limitations of QTYP and searches its dictionary to make intelligent guesses of possible alternatives to a misspelt word. It gives the correct spelling of both "grammar" and "surprise" at the first attempt and, after you have indicated that this is the word you want, automatically corrects your document.

SUGGEST uses the QTYP and Pointer Environments, requires the QTYP_SPELL extensions to be installed and needs a dictionary in QTYP format. The program itself is a "Thing" of just over 43,000 bytes, and uses an external rule file that will probably take up about another 6,000 bytes. The hardware requirements are available to most QL users!

A typical rule file for SUGGEST will contain about 350 rules and these are divided into two groups, phonetic errors and typing errors. Typing errors are often caused by pressing a key on the keyboard adjacent to that intended. On a QUERTY keyboard if you want to type S you could by mistake type W, E, D, X, Z, or A. This is covered by a few simple rules:

```
START s 0 TYPO EQ w 1 TYPO EQ e 1
TYPO ..... ENDS a 1 TYPO
```

(I have not quoted all 7 rules in this line, hence the dots.)

Another common typing mistake is to miss out double letters. This is covered by:

```
START l 0 TYPO ENDS ll 0 TYPO
```

Similar rules apply to phonetic faults. The Dutch words "peil" - "mark" and "pijl" - "arrow" sound very similar, and the two words are sometimes confused. This error is found by a few rules:

```
START ij 0 NORM ENDS ei 0 NORM START
ei 0 NORM ENDS ij 0 NORM
```

The DO IT YOURSELF approach:

If you want to try writing a rule file for your own language, there is no need to be frightened by the task. You do not have to be an expert in the language. You do have to be able to construct simple rules from information contained in dictionaries and books on spelling. This is easier than you might think.

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rules, particularly with consonants. In most languages B and P, C and S, C and K, S and Z, D and T are often confused. The most changes will have to be made in vowels and in what you might call the odds and ends. For example in Dutch "Civic" is "BurgERlijk", and "Mayor" is "BurgEmeester". I needed special rules to cover the possible fault of typing "E" instead of "ER" and vice versa.

When you are writing a rule file for SUGGEST, there will be occasions when you will be uncertain whether or not the rule you have written is correct. In this situation you should just make a decision, and at the same time make a note of your doubts. You can even do this in the rule file. There is no better way of checking this type of program than to use it for a few weeks. You will soon discover whether you were right or wrong.

SUGGEST came at a perfect time for the Dutch language as there has recently been a rationalisation of Dutch spelling. Previously there were often two versions of the same word, an "official" version and a "permitted" version. Thus "sex" could be spelt as "sex" or "seks". Now only the latter is allowed. Nevertheless there are many anomalies. It is still "sexy" and "sexshop" because these are English words. Similarly accord as a noun is spelt "akkord", but as a verb "accorderen". SUGGEST is a godsend in this situation. Perhaps it could also be for your language if you write the rule file.

Not so perfect:

I promised some news for Perfection users, many of whom have found Digital Precision's Spellchecker to be less than perfect, because it does not suggest alternatives for a misspelt word. Unfortunately although QTYP works with Perfection, you cannot use it as an alternative to Spellchecker. If you link QTYP with Perfection, you can hear it working. It beeps with every key press and you hear the tone of the beep change when you make a spelling mistake. What you cannot do is call up the menu to view the dictionary. To do this you need to press CTRL and one of the keys A - Z, all of which are used internally by Perfection.

SUGGEST is woken up by a hotkey of your own choice, and thus can be used in Perfection. It is a little bit cumbersome, as you first have to load Perfection and then link it to QTYP before waking SUGGEST. You may need to adjust some of SUGGEST's parameters and practise getting the typing speed right. Nevertheless it can be done and, just to prove it, a screen dump accompanies this article. It shows SUGGEST correcting a misspelt word. Usually SUGGEST gives more

suggestions, but the word I used is not an everyday one.

Finally two questions I am often asked at shows, but which are not relevant to the rest of this article.

The first is if there is a program that lists and counts the different words you use in a document. The program that does this is WORDSCHECK, a public domain program written by Dilwyn Jones. It is available from Qubbesoft on disk PD8 and the QUANTA library on disk UG04.

The second question is if there is a program for compiling an index to a document. QINDEX is available from Quo Vadis Design for '20. I have no personal knowledge of this program and can only quote from the Quo Vadis Catalogue:

"Create indexes for text files. Load the text file, mark entries and references and tell the program what type of index to create. Print or import the index for tidying up by hand."

SUGGEST is available from the QUANTA library on disk UG14 and may be downloaded from some bulletin boards.

SubCopy Review

March R. Renick

Program written by Dr. David R Scott. This program is titled: SUBcopy Dr. David Scott 1995 and it is a program to copy subdirectories between mixed disks. Available from the Quanta library. It is rather straight forward and reasonably well documented such that one shouldn't have much difficulty in becoming proficient in using it.

It is suggested that prior to using this program you may want to read Dr. Scott's file titled: text_doc, which gives you a considerable amount of information and makes a few comments about what is required in order for this program to work, such as: Toolkit II, either the Miracle Systems Gold Card or Super Gold Card installed, along with 'RUNTIME_EXTS' v3.20. It was compiled using 'TURBO' v2.00.

In order to start this program, you place the program disk in FLP1_ and type LRUN FLP1_BOOT [ENTER]. It only takes a few moments for it to program itself. The program only uses 10.5 kbytes plus whatever free memory is available during the copying process.

The following sequence of events describes how the program works.

1. Remove the program disk from flp1_.
2. Place the disk to be copied in flp1_, which will be the source, as well as the default drive,

unless you desire some other drive in lieu of flp1_. If you do not wish to make a change, then press ENTER. It takes a few moments for the program to read the source disk.

3. The program then instructs you to place a write enabled disk in the destination drive, which by default would be FLP2_, unless a change is made, then once again press ENTER.

4. The program warns you that to FORMAT FLP2_ you will lose all data that may exist on the disk, already. In order to proceed with FORMATTING you must press 'CTRL SHIFT V', or press 'ESC' to leave the program or ENTER to continue. It displays the following options: CTRL SHIFT V\ESC\ENTER?... If you choose to FORMAT, it takes the usual time required for formatting and the screen displays a steaming hot cup of refreshment while time goes by. If you do not wish to FORMAT then press ENTER. At this time the program then determines whether or not the disk you have placed in FLP2_ has sufficient capacity to accept all of the files. If you have placed a smaller capacity disk in FLP2_ the program will warn you of the fact and give you the option of accepting this lack of room, quitting program or pressing SPACE to alter FLP2_. The options displayed: ENTER/SPACE/ ESC?..

5. The program again asks you the name of the destination disk..? FLP2_.

6. The program again repeats the options: CTRL SHIFT V\ESC\ENTER..?. Be BRAVE and PRESS 'ENTER'.

7. The program now proceeds to give you a choice of what files you wish to COPY: .Y/N/A/Q? . Depending on the time required to copy the files, you must wait until it has completed the copying. When the copying is complete you are warned not to remove the disks until the drive lights extinguish.

8. Before you remove the disks you are given one final option: The program asks the following question. Do you wish to install the original subdirectories on FLP2_ ..Y/N? The reason being that you might want a duplicate disk as a backup disk! You cannot substitute a new disk in FLP2_ and press YES, because all you get is a disk directory with the original identification, but no data. You must keep the disk that contains the data in FLP2_ in order for the program to give you a disk with the original subdirectories. If you press Y then, when completed the program informs you that the original subdirectories have been installed OK and you may remove the completed disk from FLP2_.

9. You are then asked if further copies of disk in FLP1_ are to be made, a simple ..Y/N? is indicated.

10. If you choose not to, then it asks if you wish to COPY a new disk ..Y/N? If you press N, the

```
FLP1_SUBCOPY_BOOT TO FLP2_SUBCOPY_BOOT
FLP1_BOOT TO FLP2_BOOT
FLP1_V1.05_SUBcopy TO FLP2_V1.05_SUBcopy
FLP1_Temp_Directory_File TO FLP2_Temp_Directory_File
FLP1_SubCopy_doc TO FLP2_SubCopy_doc
```

```
When drive lights go out, copying is completed
DO NOT REMOVE DISKS AT THIS STAGE
```

```
Do you wish to install original subdirectories on FLP2_ ..Y/N?
```

program informs you of the following:

```
PROGRAM ENDED
YOU MAY NOW REMOVE ALL DISKS
TO RERUN PROGRAM: PRESS ENTER
TO RETURN TO BASIC: PRESS ESC
ENTER/ESC? ..
```

I have found this program to be well written and quite useful to me. It is my hope that others might try it out. I'm sure they will be as pleased with the result as I am.

The Aurora

Dilwyn Jones

The name comes from the Latin, "aurora", and means either 'dawn' or the 'high altitude flashing lights of the polar regions'. Whether you take the former meaning, as a 'new dawn' for the QL, or the latter to refer to the graphics card side of this replacement QL motherboard, the name is highly appropriate.

Having started life as a graphics enhancement card for the QL, the Aurora was later to become a replacement QL motherboard. It is not a complete computer in itself - you need a Gold Card, or, better still, a Super Gold Card to make it into a computer. In due course, an enhanced Gold Card, provisionally called Super Duper Gold Card or Ultra Gold Card (real name will probably be Goldfire), will become available from Qubbesoft P/D. The designer of the Aurora is Zeljko Nastasic from Croatia.

Given the recent price reductions on Super Gold Cards available now from QBranch, I expect that most Aurora buyers will make use of Super Gold Cards, since the standard Gold Card limits what you can do with the enhanced graphics facilities. You also need a number of cables and a power supply along with storage of some sort (floppy disk drive or hard disk drive) since the microdrives no longer exist on the Aurora. Finally, you will need a case of some kind to hold all this hardware. While in theory it is possible to build it into an old QL case, and the manual

suggests how this could be done, it does not seem like an easy task, so most users will probably opt for a PC-style case as I did. Finally, a keyboard and keyboard interface are required.

Mine was a mini-tower case bought very cheaply at a local computer show. It came with one of those rather bulky power supplies with a huge assortment of power connectors of various types. I didn't know it then, but the Aurora and associated peripherals are largely designed with commonly and cheaply available PC parts in mind. I was told I could use PC floppy disk drives, hard disk drives, power supplies and perhaps even speakers and LEDs already in some cases, and this proved to be true, although there are some less than straightforward aspects to assembling the whole lot.

This article is the story of one person's attempt to build an Aurora system. It was far from trouble free, but the results were worth the effort and money involved.

Apart from the Aurora and tower case, I realised I needed:

- A QPlane, a three slot powered backplane, from Qubbesoft P/D
- A Super Gold Card
- A Qubide hard disk interface from Qubbesoft P/D
- A Double Density (DD) and Extra Density (ED) pair of floppy disk drives
- An IDE hard disk
- Cables for the network ports, floppy drives, hard drive, serial ports, mouse, monitor and possibly the Super Gold Card's parallel port.
- Keyboard interface - Di-Ren, SuperHermes or Falkenberg interfaces can be used, for example.
- SVGA monitor or QL monitor (I chose to use an SVGA monitor)

The cables were obtained from Qubbesoft P/D, apart from the drive cables, which I made up myself. Ron Dunnet made up the cables for the princely sum of 3 pounds plus postage each. The serial port cables are quite easy to make up, but the lead for the QIMI mouse interface requires some careful wiring, indeed the one eventually used resulted in some crossed over wires in the 10 way IDC connector used for so many of the interface connectors. The network leads require that a single resistor be soldered across the break contacts of one jack, while the parallel printer lead was modified slightly by breaking certain connections in the IDC cable to allow a lead to be made up to go to a PC style 25-way D connector. This allowed me to use a standard PC parallel printer lead which I happened to have. These leads are very cheap to buy at shows, so I was delighted to learn that such an adaptor lead could be built. Once made up and connected, I was faced with the prospect of reconfiguring my software to print to a parallel port rather than to the normal serial ports. This turned out to be no problem in most cases. Printing was reliable and quite fast too, though so far I have only used one type of printer with it.

The first job was to assess what went where inside

the tower case. In fact, the whole lot fits into a surprisingly compact area inside the case, leaving ample space for future expansion. The QPlane board allows up to three add-on boards to be added to the Aurora, though most users will have only a (Super) Gold Card and possibly a Qubide or other hard disk interface. Two of the power supply leads (usually labelled P8 and P9) plug into the QPlane, and this assembly basically powers the Aurora and Qubide, and can also power the Super Gold Card if you opt not to use the 2.1mm 5V power socket by soldering a bridging wire between the outer terminals of the regulator under the heatsink. This is what I did and so far, this has worked fine. I opted to mount the QPlane on the base of the case, and screwed the Aurora onto the side panel inside the case where the computer circuit board normally lives in these cases. This meant that the only unsupported cards would be the Qubide, which is so small it can live without support, and the Super Gold Card, which could perhaps manage without support, but at the suggestion of John Southern, I used a short length of plastic PCB guide rails clipped onto the Aurora and Super Gold Card to limit the distance by which it could wobble. This wouldn't have been a problem if the system is used in one place all the time, but since I intend to carry the system with me to shows etc, it is probably a little touch which will help to reduce the strain on the expansion connector on the QPlane by limiting how much the Super Gold Card can wobble.

I should note that drill bit manufacturers have probably made a profit on me, as I broke several bits trying to drill through the steel case. There's a lesson to be learned here - plan carefully. My original choice of mounting location would have meant drilling through a thicker steel rib on the internal side panel, so I gave up and chose a better location. It's always easy the second time isn't it?

The Di-Ren keyboard interface was placed in the relevant socket on the Aurora board after the 8049 and 8302 chips had been "stolen" from an old QL board I had lying around. It is important to insert the 8302 first, as the Di-Ren interface overlaps one corner by a few millimetres, making it difficult to insert the chip if the interface is inserted first. The 8049 chip (which controls keyboard, sound, communications etc) is mounted on the interface itself, which in turn is mounted on the Aurora. The Di-Ren interface is a neat and compact unit, needing less space than either the equivalent Falkenberg interface or the SuperHermes from TF Services. As I had no need for the extra facilities of the SuperHermes, I had opted for the lower cost Di-Ren interface, which was adequate for my needs. A short lead goes from the 5 pin connector on the interface to a 5 pin DIN socket (like a hifi connector) which mounts on the back of the tower case, ready for me to plug in a standard AT type PC keyboard. I used a 'Jet Black' keyboard from Bitwise Technology in London, selected because it was black (obviously) and had a good feel to it for

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typing. It was, though, rather more expensive than a typical PC style keyboard. It also has a two position switch on the back, which has to be set to 'A' for it to work properly with this interface. The interface was preset for the 102 key type UK keyboard, though the instructions make it clear how to change these settings if necessary.

Next, I needed an operating system chipset. As I have a QEPIII EPROM blower, I had a go at programming a 64k chip with a copy of the JS ROM and a 16k Toolkit 2 EPROM by using SBYTES from basic to save a QL's ROM image. It was necessary to set a jumper or two on Aurora to select the ROM type for the chip used.

Oh dear, I am not certain why, but this was later shown not to work for some reason (the eeprom's fault, not the Aurora) so I found a two chip JM ROM set and soldered all pins on those together piggy back, making sure that the solder did not flow too low on the legs of the chips to prevent them from going into the single ROM socket. Although I am experienced with a soldering iron, I am not used to soldering delicate computer chips like this.

This assembly looked somewhat ungainly and I expected it not to work, but in fact it worked perfectly. The Aurora can power up using a JM, JS or Minerva ROM and in the low resolution modes is useable with this operating system, although a patched version of SMSQ/E is required to make full use of the Aurora

capabilities. SMSQ/E is not currently supplied with Aurora, though a patching program is supplied which adds drivers and configuration block for Aurora. SMSQ/E can be obtained from Jochen Merz Software or QBranch. Various cables protruded from the back of the front panel of the tower case, which I hoped I could use for such things as power indicator light, hard disk activity indicator and possibly another unused LED (labelled Turbo on the case) could become a network activity indicator. The Reset switch had an obvious application, but I haven't yet found an application for the Turbo switch, other than to switch the LED speed indicator to something silly like 188 MHz to impress owners of other computers.

All these case components had 2 or 3 pin connectors, which married perfectly to the matching connectors on the Aurora. Where 3 pin connectors were present, it was necessary to make sure that the two pins used were closest to each other, since Aurora's connectors are all 2 pin. This simply consists of pressing down on the metal innards of the 3 pin connector to push the wire out past the latch, then reinserting one of the outer pins into the centre hole on the connector, so that it can be placed on the 2 pin Aurora utility connector. The hard disk activity LED plugs onto the LED connector on the Qubide. With these LEDs, unless you happen to know which is cathode and anode, a little bit of trial and error is required to make sure it does actually light up and is the correct way around. As every single one of mine

turned out to be the wrong way around, it was fortunate that they are not damaged when used for short periods the wrong way around.

The case had a small speaker attached to its base. This could be attached to the utility connector on the Aurora, although once more the connector needed to be slightly modified. This worked first time. The audio output is, however, not very loud and by the time the case was assembled and placed under a desk, the noise from the power supply fan meant that the audio output just couldn't be heard.

There are a lot of these small connectors to attach, so it is a slightly fiddly job fixing them all to the board, though not beyond anyone with a reasonable level of dexterity.

By now, I was starting to notice that the cabling could develop into quite a jumble around the Aurora, especially as there were a number of ribbon cables to be attached. Ron Dunnet had supplied a generous length of cable on the leads he'd made up for me, and in fact this was probably a bit too long for the average assembly. In my case, I'll shorten the leads once I've got every last item working on it.

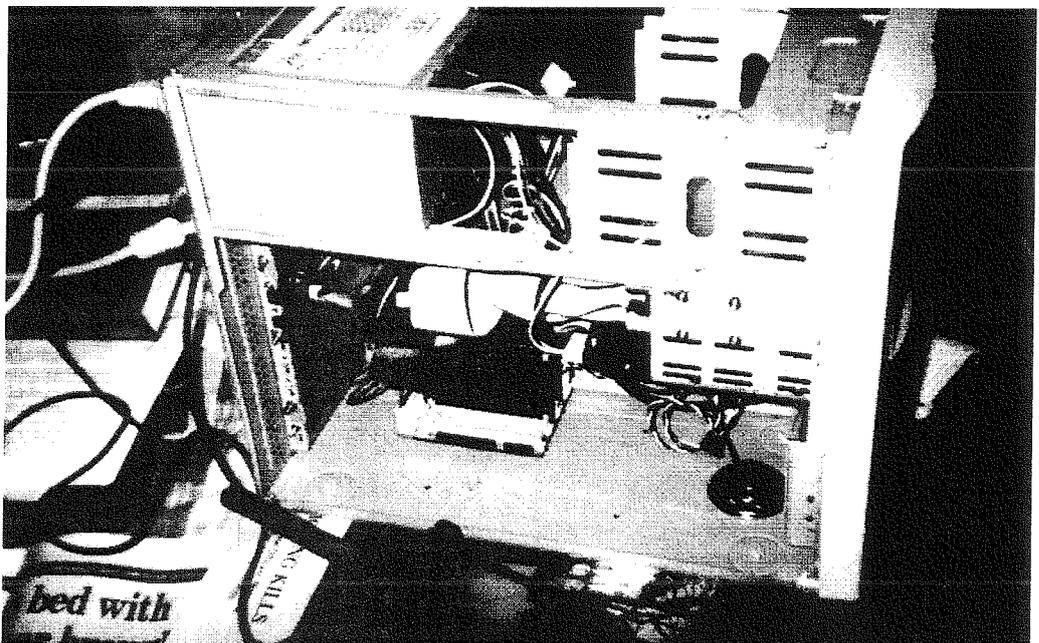
The next connectors were the 9-way serial port leads. The serial ports on the Aurora are more like those of a PC, so you end up (using Ron's leads) with SER1 and SER2 wired the same. Since the less common 6 way QL serial connectors are no longer used, you

have to make up new QL serial port leads. One example of where you'll have to do some rewiring is with those ubiquitous serial to parallel print converters. In my case, I had opted to extend the parallel port connector from the Super Gold Card, so this was not a problem. Since the new serial port connectors match those of the PC, modems etc with 9 pin connectors can now be plugged in without adaptor leads I suppose, though at the time of writing I had not tried this.

The SVGA ribbon cable was affixed to a pre-drilled hole on the tower case, alongside the 25-way parallel port connector. By now, all the pre-drilled holes were used up and so I had to do some lateral thinking on how to mount the network and mouse sockets. With some tower cases, you can simply unscrew the panel holding the card slots at the back of the case and simply attach a new solid

panel which you can drill to take any extra connectors. In this case, the back panel was riveted in place, making this more difficult, and anyway the way in which this was recessed would have made it difficult to mount a false back, so I used the slot blanking plates supplied with the case as straps to hold a plastic panel in place over the grill, having removed a couple of slot covers to allow the extra sockets to be accessed. Doing things this way meant that there was much less unscreened area exposed at the back of the case. And if I need to add any more connectors in the future, it will be easy to remove more panel strips to expose more of the plastic sheet for mounting the holes.

By now, things were getting a bit untidy, with cables all over the place and I hadn't even started on the drive cabling, so a few tie-wraps were used to tidy things up by coiling up the slack in some of the cables. At this stage, I had one HD disk drive to be



used, so a simple ribbon cable with a Super Gold Card style connector at one end and a 3.5 inch disk type connector at the other end, and plugged in. Find the correct power connector for this type of drive from the power supply and plug it in. That's the advantage of using the same components as PCs for this work - all the connectors and mountings match up and little rewiring is actually needed, a real saving in effort and worry for the less experienced computer hardware builder like me.

A quick once-over of all the cabling and mountings showed I thought I was ready to plug in and test as suggested in the manual. Disaster. Nothing worked. I unplugged the disk drive ribbon cable and tried again. Still no luck, so I thought I'd better contact Qubbesoft P/D for help. Ron was very patient with me, going through all the steps of diagnosing the nature of the problem. No joy. As the Hove

Quanta Workshop was imminent, Ron suggested I bring the system along and he'd take a look there.

The night before the show, Keith Mitchell (who'd already built such a system) had a look at the system for me, and we found that in fact I'd been unlucky. The disk drive was a second hand one which proved to be faulty. It had a short circuit in it, which caused the tower case power supply to automatically shut down, although it continued to make a noise. Once disconnected, the Aurora would start up, though we had no floppy or hard drive with which to install the SMSQ-E. Keith decided to network my machine to his and with a bit of editing of his boot program, we managed to start SMSQ/E etc from the hard drive on his machine, to prove it worked. This took care of testing the network circuitry and the cables Ron had supplied.

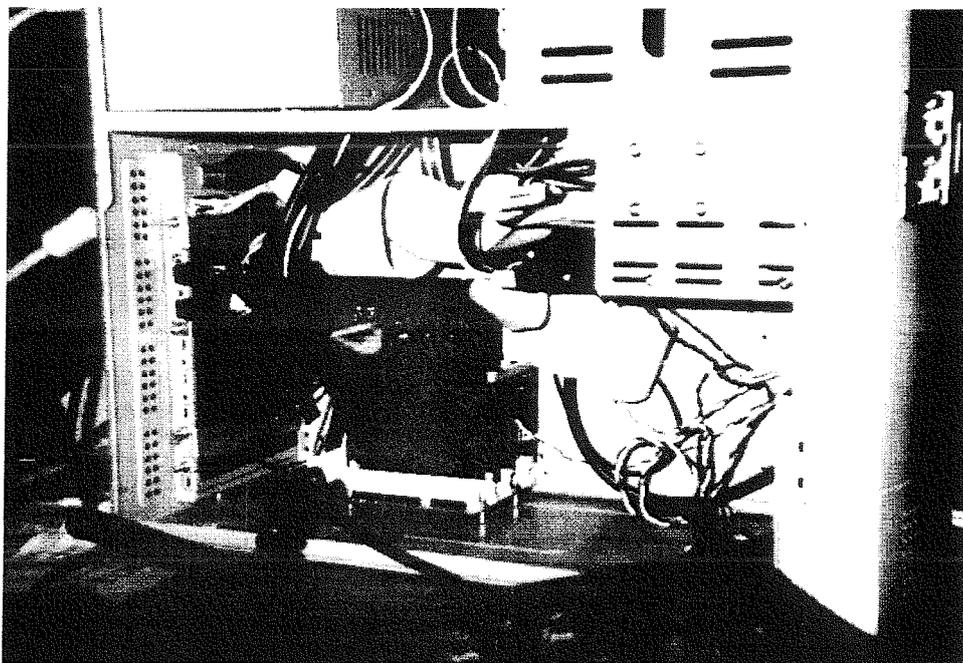
The following day, I purchased a pair of drives, one DD and one ED to make the Aurora into a two drive system. I also added the Qubide and the hard

disk drive, which I later realised was a bad move, as I had not made a recent backup of its content, so I could easily have got into some difficulty as a result. At this point, the problems really started and wasted a lot of my time.

Individual-ly, the floppy disk drives seemed to work, but not when both were used together. "Oh, bother!" I thought (or words to that effect). The original cable I'd made up had just one connector for drives on it, so I'd used a bought cable with two connectors on it. But it was wired for PCs, allowing modern drives without drive select switches or jumpers to be used (i.e. allowing both drives to have the same Drive Select setting). Of course, this terminally confused the QL disk controller, and as I didn't have a clue what lines were transposed by this modified wiring, upon advice from a hardware expert I cut off the end of the cable and clamped on a second disk drive connector in parallel with the first on the end of the remaining length of cable, which was still long enough to reach both drives. The drive select settings were altered on the ED drive to drive 2. Both drives were placed outside the case, connected to the power

supply and the whole lot switched on. Eureka, it worked! At last, I felt quite pleased with myself, and screwed the whole lot back into the case and powered up again.

Oh dear. The drives had all suddenly stopped working. What on earth could have gone wrong now? All of a sudden I found myself in the situation of having an assembly which would only work outside the case. Ron to the rescue again. He found that the screws I'd used to mount the drives were too long and probably touching something inside the drives. By half unscrewing these, the problem went away, except that a new problem became apparent. After using a few washers under the screw heads to reduce the distance they penetrated into the drives, I powered up again and found that the drives would not format properly, or if they formatted disks at all, they would be to the wrong capacity or unreadable on other people's computers. More words to the effect of "Oh, bother!"



Along comes Stuart Honeyball, with the usual knack of being in the right place at the right time as far as I was concerned. He suggested trying the special format options of adding *D, *H or *E as the 11th

and 12th characters of the medium name to be formatted, thus forcing a drive to format to a given capacity rather than trying to determine the disk type automatically. This worked and I was a happy man once more. "Great," I thought, and proceeded to tidy up the cables and prepared to do up the case ready to show off my completed Aurora system.

All of a sudden, a new fault reared its head. The keyboard started producing spurious characters and auto repeat went berserk, making typing virtually impossible. Several resets and attempts to change the 8049 and relocate cables etc failed to cure the problem and panic began to set in. This problem had most of the experts present terminally confused and one by one they retreated. Unluckily for Di-Ren's Robin Barker, he walked in on this and



was immediately pressed into action to solve this problem, as it appeared to emanate from the keyboard interface. He tried re-seating the interface, checking for broken connections and so on. Eventually, he diagnosed the most likely source of the problem was that the corner of the interface PCB rested on the corner of the 8302, so either the interface tracks were being shorted, or the proximity was causing interference to be induced. My own experiments at home later showed that while adding a layer or two of insulating tape between the two helped, the main problem seemed to be heat build-up and external interference from all the other computers nearby while the case lid was removed was more to blame.

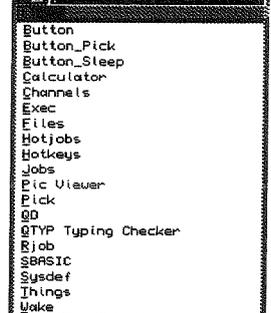
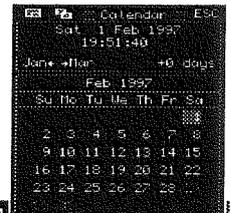
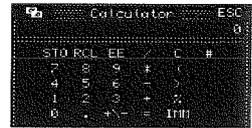
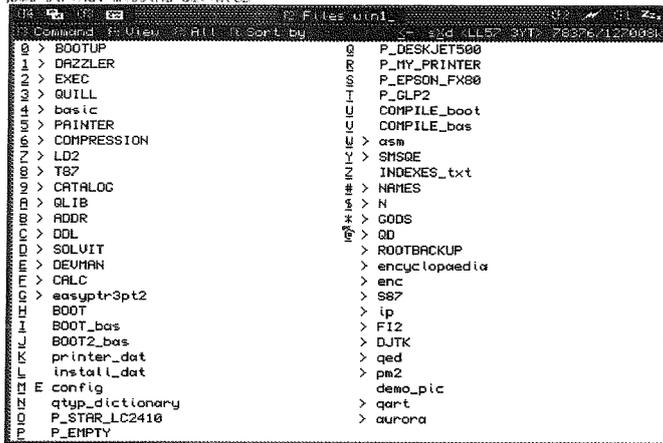
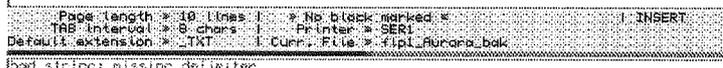
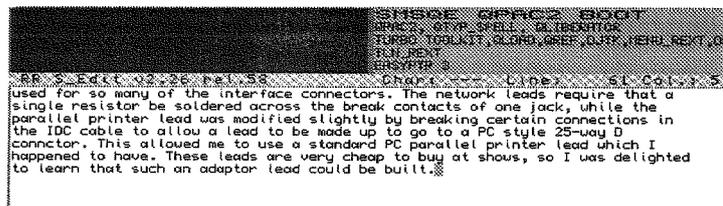
Having got all this sorted out, I suddenly realised that I had not tried out the QIMI mouse interface. At first it didn't work, but then I realised I'd left an Aurora jumper set to Disable QIMI. I replaced this and in turn tried out 3 different Atari mice and a tracker ball. The tracker ball worked first time, one of the mice (an older 2 button black Atari mouse) also worked first time, a second mouse failed to work altogether, and was later found to have a faulty movement sensor in one plane. The third mouse was a high resolution model, which worked, but was far too sensitive to movement and kept bringing up a pointer on screen even when you hadn't moved it. Looking at it seemed enough (mind you, I tend to have that effect on people and objects!). I later tried this mouse on a conventional QL QIMI interface and it worked fine.

Ron later theorised that the Aurora mouse interface was a little faster and more sensitive than the older QIMI interface for the QL, so perhaps this was the reason why. I have since heard of users getting some random problems when they use a mouse key. John Southern has managed to reduce or eliminate this problem by fitting capacitors in line to filter out the errors. Although 3 button mice can be used, only the left and right mouse buttons are recognised - the middle button is ignored. With a serial mouse, the middle button is usually translated to an ESC key press, and this would have been very useful.

There were several hiccups along the way, but my Aurora has become a very useful system indeed.

The one problem I have found which I haven't been able to solve has been the lack of volume of the sound output. Since the speaker is buried inside the tower case, it is barely audible when placed on the floor under a desk, for example. I certainly would not attempt to build an Aurora into an original case, as it seems to be more hard work than it's worth, though I understand that a few users in North America have expressed an interest in attempting to do this.

There are a number of jumper settings to choose for various aspects of the Aurora's operation. Some of these are simple and obvious, while others are harder to fathom. The monitor settings are an example - if using a plain PC SVGA monitor, the supplied default settings may prove adequate, but it is not the easiest of things to work out when you haven't had of terms like 'interlace' etc. I have



heard of at least one user who failed to get it to work with an NEC monitor, which required a special signal not available from Aurora.

In use, the system has been running for a couple of weeks now and has performed well; indeed, some of this issue of QL Today was prepared on this Aurora system. Once the 256 colour drivers become available, work can start on producing software to make use of the extended graphics capabilities and with any luck we'll soon have the multi-colour displays we've longed for on the QL.

Software compatibility is good on the whole, though older software which relies on having the original QL 512x256 screen present does not run properly in the extended resolution modes. Some

programs (e.g. some versions of Text 87) have difficulties in some resolutions, because of assumptions made about the resolution and line widths in memory (the Aurora uses a fixed line width irrespective of resolution, so programmers should always explicitly test for the line width in bytes as held in the window channel definition blocks). Basically, if the program runs on a (Super) Gold Card and can handle the extended resolutions, it should work on the Aurora. Examples of programs which don't, unfortunately, include early versions of my Page Designer programs, and there are quite a few such older programs. At least you can switch to 512x256 display mode for compatibility. Available resolutions go from 512 pixels across up to 1024 across, with several in between, and aspect ratios of 2:1 or 4:3, allowing up to 1024x512 or 1024x768 on suitable monitors. In practice, the largest resolution modes really demand a larger monitor, because text is so small on a typical 14 inch monitor as to be almost unreadable. I found that the most comfortable resolution to work with on my monitor was VGA, with a 640x480 resolution, giving a good compromise between readable text and available screen area.

I am now very happy with my system and have found it to be a good investment of both time and money. I am not convinced that someone who has no knowledge of hardware should embark on this construction alone, but certainly, it is far from difficult provided you use known working components and cables. Be prepared for it to take a while, and for some lateral thinking to be required to solve some problems! The software installation is about as easy as it can be made - all you need is to buy a copy of SMSQ/E and run the supplied program to patch some new code onto it. I got good support from Qubbesoft P/D when things got difficult, which is reassuring! I think Aurora will be a success story for both Qubbesoft P/D and the QL in general.



Paris QL Meeting

Roy Wood

There has not been a QL show in France for many years and, when this one was first suggested, none of us were very sure about how well it would be received. The original plan was that the party would consist of Bill Richardson, Ron Dunnett and his wife and myself but Bill had to pull out at the last moment because of his own wife's illness. This meant that, instead of Bill's large vehicle we would have to travel in Ron's little Fiat complete with all of our stock. As it turned out this was quite a comfortable ride and we

arrived in Paris at around 9.30 pm on the evening before the show. Arriving in Paris was, however, only part of the journey. We followed all of the directions to the hotel only to find ourselves continually on the wrong road. Eventually we were very close to the hotel itself but on the wrong side of the Sienne and in total darkness. It took a further hour before we finally managed to get to the safety of the Forest Hill Hotel. The show did not start until 2.00 pm so we had a leisurely breakfast and then set off around the notorious Peripherique (a ring road which surrounds Paris and is either totally jammed up or a race track - or both). On this particular morning the Peripherique was 'fluide' and so we got to the area in which the show was to be held quite early. Being seasoned veterans of QL shows none of us had thought to bring either a copy of QL Today or any of the flyers for the show so, although we knew which street it was in and which number we could not really work out where it was to be held. We retired to a local cafe for a cup of coffee while I tried to contact VODAFONE who, for some strange reason of their own, had decided to turn my mobile phone off for a while and then, when they switched it back on a few hours later, switch off my answering machine. This meant that for the whole of that weekend anyone who called Q Branch got diverted to my mobile phone and then received a French message. I bet they were confused. After a while we managed to locate Jean-Louis Dianoux, who organised the event and he led us through a labyrinth of corridors in a block of flats and thence to the room which housed the show. This was something of a revelation because it housed the most amazing collection of old computers that I have seen for some time. They cleared a few tables for us and we set up our wares. Tony Tebby set up his computer and began to re-write software (version 1.38 of QPAC 2 emerged then and there) and pretty soon the public began to show up. I had wanted to meet Theirry Godefroy because I had been using his excellent software for some time and, although we actually got to wave 'hello' we did not get to speak to each other because I was so busy demonstrating programs to people. Wolfgang Lenerz, who had put Jochen and Tony Tebby up for the show weekend, showed me his latest additions to the PWBasic extensions for ProWesS and the afternoon flew past. One of the more amusing points in the afternoon was when Tony Firshman asked around to see if anyone had a normal QL with them to test a piece of hardware on he found that there was not a single QL in the building. There were PCs with QXLs and QPC running in them, a couple of Atari TTs and Ron Dunnett's Aurora based QL but no little black boxes. At the end of the day they had to actually throw us out and, as usual, it was Jochen who was still copying disks when that time came. We went back to the hotel that Stuart Honeyball and Tony Firshman were staying in for a meal and, again as usual, Stuart and



Tony cycled off through Paris with their wares on their back in rucksacks. We formed a five car convoy through Paris. It is hard enough getting five cars to follow each other in any city -- but Paris !! Anyhow we made it and, in spite of the fact that Tony Firshman has attempted to demolish the glass display cabinet with a rucksack full of SuperHermes, they let us into the hotel restaurant and we enjoyed a thoroughly good meal washed down with some excellent red wine. These meals are a mixture of fun poking and idea forums in equal measure. Jochen said he would move to England if the taxes and telephone charges got any worse in Germany and Ron asked 'Why not Holland?' 'Well,' said Jochen, 'If you fail your driving test three times there you have to have yellow number plates' 'We have yellow number plates in England', said Ron looking puzzled. 'Precisely', said Jochen and burst into laughter. See what I mean. When we attempted to get the bill for the meal we found that the QL club of France had paid for us all. Thank you very much. We parted with many thanks for the hospitality and to Yona Linke,(treasurer) and Jean-Louis Dianoux, the organiser of the event. I think there will be another show here soon.

■

Some QXL & QLTools Notes

P. H. Tanner

DOS is 'orrid.

But it is here, and I fear that it won't go away. Besides: it is one of the two channels used by my QXL to communicate with the outside world. So that it cannot be ignored. Here are a few ways by which I use such features as it has to facilitate my QXL operations.

```
IF '%1'==' ' GOTO old
IF '%1'=='/' GOTO solidus
IF NOT EXIST c:\a.win REName c:\qxl.win c:\a.win
IF NOT EXIST c:\b.win REName c:\qxl.win c:\b.win
IF NOT EXIST c:\c.win REName c:\qxl.win c:\c.win
REMark add/remove additional/superfluous files as required
REName c:\%1.win c:\qxl.win
:old
smsq
GOTO close
:solidus
PAUSE Hit ^C if QXL is not ready for keyboard I/O
smsq/
:close
```

If QXL is entered with no input parameter, then whatever is the current QXL.WIN is used.

If the parameter is '/', then the running QXL is reconnected with the PC keyboard. The PAUSE

SMSQ provides for the virtual hard disc win1_ which is physically the DOS file C:\QXL.WIN. This is created by the SMSQ formatting utility which opens the file, writes to it the necessary housekeeping blocks, and then pads it out to the specified size.

So that, no matter how many or how few the files opened in win1_ or the bytes used, the DOS file remains at the same, maximum, size. And if DOS backup copies are kept of QXL.WIN, then they are also of that maximum size - unless they are ZIPPed or compressed by a similar utility.

I find this ridiculous.

What I have done is to take a copy of QXL.WIN as formatted by SMSQ, and strip off the data blocks, leaving only the file directory and sector map. In the case of a nominal 1Mb pseudo-disc this results in a file of 4162 bytes, which I call ONEMEG.WIN. Now, when I wish to format win1_, I do not use the SMSQ utility, but copy ONEMEG.WIN to QXL.WIN. Which is a whole load faster, apart from any other consideration.

When SMSQ comes to write a file to win1_, if there is not room in the truncated QXL.WIN to accommodate the bytes required, then DOS extends it by the number of sectors required. So that the file remains at minimum size while the pseudo-disc is expanding (it is beyond my powers to devise a way of persuading DOS to contract the thing again should any of the QXL files be deleted).

Those whose systems support hard disc partitions, or have multiple physical discs, will be able to maintain win1_...win_8.

I am not in this position. But I can do nearly as well since the reduced size of the files makes it practical to keep separate copies of QXL.WIN for separate applications. My DOS batch file, QXL.BAT, which I use to establish contact with SMSQ, reads something like this:

tripwire is needed since in its default state my QXL runs with the system loop stopped, and any I/O is routed via the NET to one of my QLs. I must have restored control to SMSQ before I attempt to resume

communication over the PC bus.

Else the parameter is taken to be a valid filename, and that file is substituted for the current one.

The programming may look messy, but it does ensure the abortion of the operation together with the display of appropriate error messages should the file list have got out of kilter, or the input parameter have been invalid. And the use of RENAME ensures that no data gets overwritten.

By convention each of the .WIN pseudo-discs in the list holds an appropriate boot file so that the effect is much the same as if I had a bundle of floppies from which a selection could be made before booting from the a: drive.

There will be those who would prefer to achieve the same effect with a single .WIN file, and a multiple choice boot. My variegated assortment does have its advantages, though.

When I said, up there, that I was unable to support virtual hard discs beyond win1_, I was referring to physical hard discs. Given a reference to a file on win2_, SMSQ looks for the DOS file D:\QXL.WIN. And I do have a device D:, which is a virtual disc of 2 Mb capacity. So if I copy one of my .WIN files to this ramdisc it can be accessed from the QXL.

As an example: one of my standard bootable .WIN files contains the editing tasks, Master Spy and Quill. With the QXL booted from this as win1_, I can edit win2_files contained in any other .WIN file by copying it up to the virtual disc.

I can operate with the one "disc" containing the executables, and any number of data "discs". As one used to do with [mdv][flp]_1 and [mdv][flp]_2. This combines the immediacy of a ramdisc with the convenience that the files are already contained in a DOS entity when the time comes to save to non-volatile storage. A procedure which makes more sense if the .WIN files are of a sensible size, and not full of air.

I have played with changing the volume label, and the random number, but have so far been unable to get SMSQ to recognise the change of .WIN file. I therefore find it necessary to do DEL_DEFB. This is a scattergun which zaps the whole disc cache. Once upon a time, when I used QFLASH, of immortal memory, to control my microdrives, I found it necessary to write myself a little UNSLAVE () procedure which unhooked the particular device to which a backup was to be made. One of these days I must make an attempt to resurrect it for my QXL. It is sorely needed here.

On a number of occasions the sum of the nominal sizes of my pseudo-discs has exceeded the capacity of the physical disc. But diversity is a wonderful principle. Ask any installing electrician.

Some day I shall get caught. And who will be the Silly Billy then ?

One of the utilities that makes the QXL possible is QLTOOLS. Floppies cross-formatted by QLT are recognised by SMSQ where those prepared by its

own internal routine are rejected. But that is another story.

The facility to exchange files between QL- and PC-formatted discs is invaluable. But it is a single shot program.

I have a batch file, QLT.BAT, which organises QLTOOLS. This assumes the QL device to be the DOS floppy b:, and the DOS path to be one or other of D:\UP or D:\DOWN. The command line has the form :

```
QLT <command letter> <list>
```

So that for copying UP the command

```
QLT n FN1 FN2 . . . FNn
```

is entered, which branches to the label "type", where the code reads :

```
:type SHIFT qltools b: -n%1 >d:\up\%1 ECHO  
%1 IF NOT '%2'==" GOTO type GOTO return
```

which results in the filenames in the list being copied up to the PC from the QL-formatted disc.

Sadly this means that I must remain with v1.6 of QLTOOLS. v2.5, of which I have a copy, looks fascinating. But it now operates directly with filenames, rather than their ordinal number in the directory. And you can get a lot more numbers into the limited command line length that DOS offers than you can names.

Warning: if you are not an experienced user, it is quite easy to ruin the data contained in the QXL.WIN file. It is a good idea to have recent backups anyway, but we strongly advise you to make backups before you try any of the above - Editors.



Noughts & Crosses again

Ron Humphries

Following on from issue 4 of QL Today, I thought I had better have a go myself at an algorithm for this game to allow a human to play against the QL, hence this entry.

I have to say that I'm not too happy with it; it's not so much an algorithm as a lookup table. In time, I want to do a proper alpha-beta pruning method as I still have a gut feeling that it should result in a forced win for the second player.

Playing this version I've submitted against itself sometimes results in an exact repetition of a position (time and place) which the program announces and offers a draw. If this happens ten times, the program unilaterally declares the game a draw anyway.

You find OX3_exe (Turbo-compiled) on the cover disk.



Hardware or not Hardware (that's the question)

Mats Averkvist

I had just started this series of articles in The Swedish QL-group's magazine "QL-bladet", when it was decided that The Swedish QL-group would come to an end. Perhaps inevitable, with only 40 members left and just a few real active members. Is it just as bad for Quanta and other groups? IQLR is gone, not for member reasons I believe. But out of the ashes, a new point of impact has been created, this one. Thank you chaps!

So - with your permission and support (hopefully), I'll try to continue my series of articles in this new forum. It will not be in every issue of QL Today, but maybe in every other issue. (I too have a lot of "iron bars in the fire" (Swedish phrase, I don't know the English equivalent).

Part 1

I used to say: "Why do something in software when you can do it in hardware". Why do some people make every possible effort to create a program which could easily be done with a simple hardware device? Why do people load a lot of tool-kits and small very smart programs into computer memory and then find out that they can't use them because there's no memory left? Why not put all those nice little tools into an Eprom?

Answers:

- They have never opened a QL or don't know how to do it.
- They don't know anything about hardware electronics.
- They are software experts. Read as: deals only with software.
- They have no access to an Eprom programmer.

The only reason to put a toolkit-program into memory should be those which are likely to change now and then. But there are hardware solutions even to that.

For me everything started in 1986 when I bought my first QL. I've always been curious about how things are built, so it wasn't long before I had removed the screws to the QL. I got disappointed at first when I saw the two big custom-built IC's inside. Soon I got my eyes on the big black ugly looking power supply which I stumbled over everywhere. I started to think of how to get rid of it. I also had a disc interface and two disc drives which popped their noses out of the left side. Everything in one case would be the best! Soon, I took a firm hand to my solder iron. But before you do the same, there are a few things that you ought to know.

Something about number systems and the memory in the QL

Normally when we make calculations we use the Decimal number system, i.e. the numbers 0-9. But when a computer calculates it uses the Binary number system, numbers 0-1. The system power supply in computers is +5 Volts, and it's decided that 0V will correspond to the number 0 and +5V will correspond to the number 1. There are also other definitions of 0 and 1:

	Zero(0)	One(1)
Level	low	High
Expression	false	true
Voltage	0 V	+5 V
A lamp	off	on
A switch	off	on

The Decimal number system

Numbers: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9

2134 can be split up like: $2000 + 100 + 30 + 4$

And that as: $2*1000 + 1*100 + 3*10 + 4*1$

we go on: $2*10^3 + 1*10^2 + 3*10^1 + 4*10^0$

Try:

```
PRINT 2*10^3+1*10^2+3*10^1+4*10^0
```

should be 2134

In the Decimal number system the BASE is 10.

The Binary number system

Numbers: 0, 1

11010 can be split up like: $1*2^4 + 1*2^3 + 0*2^2 + 1*2^1 + 0*2^0$

Try:

```
PRINT 1*2^4+1*2^3+0*2^2+1*2^1+0*2^0
```

should be 26, which is the decimal for 11010.

In the Binary number system the BASE is 2.

When you communicate with the CPU, the central processor, there will be a lot of numbers to write if you use the Binary number system. Therefore another number system was introduced, the Hexadecimal number system.

The Hexadecimal number system

Numbers: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 and A, B, C, D, E, F

F46C can be split up like:

$15*16^3 + 4*16^2 + 6*16^1 + 12*16^0$

F 4 6 C (see table)

Try:

```
PRINT 15*16^3+4*16^2+6*16^1+12*16^0
```

which is 62572.

In the Hexadecimal number system the BASE is 16.

An example:

Value: 128 64 32 16 8 4 2 1
1 0 0 1 1 1 0 1
-----9----- D----- = 9D (hex)
= 128 + 16 + 8 + 4 + 1 = 157 (Dec)

Conversion table: DEC BIN HEX

	DEC	BIN	HEX
	0	0000	0
<i>One digit in a binary number is called Bit.</i>	1	0001	1
<i>8 Bits form a Byte.</i>	2	0010	2
<i>16 Bits form a Word.</i>	3	0011	3
<i>32 Bits form a Longword</i>	4	0100	4
	5	0101	5
	6	0110	6
<i>1kByte = 1024 Bytes</i>	7	0111	7
<i>= 2¹⁰ * 8 Bits</i>	8	1000	8
	9	1001	9
<i>1MByte = 1024 * 1024 Bytes</i>	10	1010	A
<i>= 2²⁰ * 8 Bits</i>	11	1011	B
	12	1100	C
<i>1GByte = 1024³ Bytes</i>	13	1101	D
<i>= 2³⁰ * 8 Bits</i>	14	1110	E
	15	1111	F

The next part will deal with the memory arrangement of the QL.

Sorting Routines -Part 1

Dilwyn Jones

In this article I will present a number of data sorting routines you can use in your own BASIC programs. The relative merits of the routines and brief explanations of how they work will be presented. A means of testing and timing all the routines will also be given, so that you can work out for yourself which routines are best suited to your needs. For example, if you are sorting relatively small amounts of data, speed may be less important than the length of a particular routine. This article will present a Pigeon sort algorithm, which will be new to many QL users, and this is the fastest sorting routine I have yet come across, faster even than the Quicksort routines.

Although the testing routines do not allow for display of what happens to the data during a sorting routine, this is easily added by means of simple print statements. The test program sets up two arrays, called array1\$() and array2\$(). Array1\$() is the "master" copy of the data to be sorted, and is copied into array2\$() for each sort, so the routines actually sort the array called array2\$(). This is important, as it ensures that the

routines are compared "like for like" using exactly the same data. To see what is happening to the data at any given point in the routines, we need only insert a print statement into the routines like this:

```
PRINT !array2$!
```

Using the PRINT separator ! means that the elements are all printed on one line with a space between them. It is suggested that you only do this for fairly small array sizes since it is difficult to absorb the amount of data presented from large arrays!

The test program allows you to test the routines using either random data, ascending order data (i.e. ready sorted, all routines here sort data into ascending order, the most common requirement), descending order data (used for testing worst-case sorting, since the routines will have to completely reverse the data), or using a built in selection of words held in data statements, for a slightly better test of how "typical" string data is sorted. Option 1, the random data, selects random one character test strings, while options 2 and 3 use fixed length numeric strings (e.g. 001, 050 and 100). The listings themselves are on the QL Today cover disk to save space within the magazine. TEST_bas is a SuperBASIC program which contains all of the sorting routines and a timing mechanism as described. Please note that to separate the sorting routines on the disk from the other programs, I have added the prefix SORT_ to the filenames. LOAD FLP1_SORT_TEST_bas to load the test routines into SuperBASIC, for example. It was done this way rather than using sub-directories, since not all users (e.g. those with older Trump Cards) would be able to access sub-directories. The routines themselves are also on the disk as separate routines, to save you the work of extracting individual routines from the rather large test program.

There are three points I would like to note here. First, all of the routines in sort_TEST_bas are designed to sort string data into ascending order (i.e. lowest value first) and are subject to any quirks of QL string sorting (e.g. QL string comparisons consider lower case text to have a higher value than upper case, so the routines will always - famous last words - place "Hello" higher in an array than "hello", and the handling of the extended character set including the accented characters). Second, all routines start sorting from subscript zero. And third, since some of the routines pass array sections by reference, two problems may arise here. Compiling them with Turbo may cause some problems due to the use of reference parameter passing, and also passing an array with just one entry may cause a few problems because of the use of the DIMN function to check array sizes. If a single array entry is passed by



reference as a parameter, it becomes a one dimension string array in the parameter list, so DIMN does not return the value we expect. It returns the maximum string length, rather than the number of elements in the array (1 in this case). Normally, this would not be a problem, but it did cause me considerable loss of time debugging until I latched on to this problem, since several of the routines fell over with unexpected errors when an array slice with just one entry was passed to the other routines, e.g. as in BUBBLE_SORT3. This was a good example of unfortunate and unforeseen problems which can arise when attempting to write such complex routines!

Swapping entries

Something common to all sorting routines is the need to be able to swap entries in a list when they are found to be out of order. To do this, a temporary variable needs to be created while the entries are moved around. Suppose we are sorting the array called array\$() and we need to swap entries 'a' and 'b', we can use this three line routine, which will appear in most of the sorting routines described in this article.

```
temp$ = array$(a)
array$(a) = array$(b)
array$(b) = temp$
```

This is used so many times that it was tempting to make it into a procedure of its own (e.g. DEF PROC SWAP(a,b)) to save some typing, but since the routines are supplied on disk, it saves the need to merge an extra procedure for each routine, so I used the longhand method and put the swapping routine into all sorts which needed it.

Next issue, we'll look at the various sorts.

Clock Trimmer

Stuart Honeyball

The real time clocks (RTC) on many computers these days drift much more than a cheap digital watch. Indeed, one company I know of were selling PCs with clocks that would drift over a minute a day. In a conversation with Dietrich Buder he stated that he would like his SUPER GOLD CARD to keep time more accurately and suggested I publish a method of adding a trimmer capacitor to the RTC oscillator. After thinking about it I came up with the following program which has the advantage over the trim-cap that it can be applied not just to GOLD CARDS but also to QXLs and other emulators.

It is best if the program is added to your "Boot" file. You should also add a line containing CorrectClock so that every time the "Boot" file is run the time is automatically corrected.

There are 2 procedures. CheckTimeFile should be called when you first use the program and subsequently from time to time, say once a week. It looks for a file, in this case called "Win1_TimeFile", and if it is not found then it creates the file. Subsequent calls will ask you how far the clock has drifted so make sure you know the exact time prior to using this procedure. Do not use SDATE or ADATE between calls to this procedure because it stores parameters that relate to your real time clock and needs to know the drift between calls to calculate this. If you do use software that writes to the RTC then use PROT_DATE 1 beforehand.

The other procedure uses the measure drift to compensate and correct the clock each time you boot up. You will not see any correction done until the CheckTimeFile procedure has been called for the 2nd time - so don't expect to have a precise clock until after the first week.

You will find the program ClockAdjust_bas on the cover disk, so that you don't have to type it in.

QL Today Cover competition

Inspired by the LDUMP test in the German part of QL Today, which produced really good results, much better than anybody would expect, we thought: if QL users are SO creative, why not let them do some QL Today cover pictures?

Therefore, here's the challenge: create a cover picture for the next issue of QL Today. You can use any tool you want to create it. Of course, it should be QL-related!

All entries MUST reach Jochen Merz Software before April, 15th.

A jury (consisting of the editors & QL users) will pick the winner. **First prize: 1 year FREE subscription of QL Today!**

Cover Disk

As mentioned before, the current issue of QL Today comes with a Cover Disk.

If your Cover Disk becomes unreadable or faulty (bad or changed medium error), then please return it together with one International Reply Coupon to your QL Today distributor (Jochen Merz Software or QBranch), and it will be replaced.

If you have any compatibility or bug problem with any of the programs supplied on the disk, then please contact the author directly.

To get more details about the contents of the disk, put it into FLP1_ and reset your QL. It will automatically load a VIEWER program which will give you detailed information about the various files. VIEWER is straightforward to use; we are sure that you will not find any difficulties in using it.

The files D3_... and D6_... as well as D_TXT are programs which were published in the German supplement of QL Today.

If you think we could have used a HD disk instead of a DD disk, to fill the disk with more PD software: of course we thought about this possibility. In fact, it would have been much easier to get a large number of HD disks instead of DD disks. However, as we cannot guarantee that every reader of QL Today owns disk drives which support HD disks, we had to choose DD.

■

The last Word

We are looking back at the first year of QL Today. When we started QL Today, nobody expected it to be so much work. However, the aim always was and still is to produce a good magazine - readers reactions proved that we did a good job.

Thanks to the editors, publisher, authors and you, the reader, we plan to carry on for a long time. We have lots of ideas for the future (the cover disk was just one of them) thanks to a lot of user feedback. Please keep on telling us what you like, dislike, or what you would like to see in future issues.

Remember: we're producing QL Today for YOU, the QL User.

Thank you very much for supporting us.

■

JOCHEN MERZ
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QPC

The QL-Emulator for PC

With QPC, you can run most of the current QL-software on PC's. You need at least a 486, but QPC will run faster on a Pentium. 4MB RAM and DOS 6.xx or 8MB RAM and Windows95™. QPC can now easily be installed to be called from Win95 - the manual has been rewritten!

A double-mouseclick can turn your PC into a better QDOS-compatible system. Better, because with QPC you get Tony Tebby's new operating system SMSQ/E for QPC - it is included in the price!

Do not worry about any soldering, plug-in cards etc. - QPC is a software emulator, it does not need any extra hardware! This means, you can install it even on laptops!

QPC offers access to the serial ports (up to 57600 baud!), parallel port, harddisk and floppy disks. It can read and write QL and DOS floppy disks, so data exchange is easy. You can playback audio CDs even from within QPC. PS/2 and serial mice are supported.

The new display driver not only supports 512x256, 640x350, 640x480 and 800x600 pixel resolutions, but with the new VESA support also even higher ones (e.g. 1024x768).

QPC is not expensive: you get the emulator plus the operating system SMSQ/E for only **DM 249,-**

If you own SMSQ/E for another system you pay only **DM 199,-**

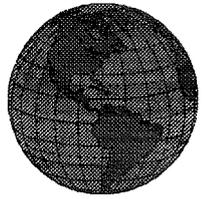
If you want to get the excellent CueShell Desktop program from Albin Hesser bundled with QPC, just add **DM 40,-**

Test QPC!

A demo version which will do everything the full version does (except writing to floppy and harddisk) is available for only DM 6,- including p&p (or send 3 international Reply Coupons).



The QL Show Agenda



- Saturday, 8th of March 1997** England, Manchester Quanta Workshop, The Gardens Hotel, 55 Piccadilly, Manchester
- Saturday, 5th of April 1997** The Netherlands, Eindhoven, St. Joris College - details as usual.
- Sunday, 20th of April 1997** England, Quanta Workshop and A.G.M., The Victory Services Club, 63/79 Seymour Street, London W2 (5 minutes walk from Marble Arch)
- Saturday, 3rd of May 1997** QL-Show USA. Details see below.
- Saturday, 24th of May 1997** The Netherlands, Eindhoven, St. Joris College - same venue as always.
- Sunday, 15th of June 1997** Germany, Solms, Taunushalle.

If you need more details, please contact your local QL user group or QL Today!
You can help turning QL shows into even more interesting events!

QL Show USA

Here are the initial details for the 97 North American QL Show in Bedford, PA. Although Bedford is on an interstate exit this is not a heavily populated area. There is no public transportation but the restaurant is within walking distance of the recommended motel and there are several other motels and stores nearby.

Date of the Show: Saturday May 3, 1997

Location of the Show: Carriage House Restaurant

Exit 11 off the I-70 & I-76 Interstate
Bedford, Pennsylvania USA

Phone: (814) 623-1174

Bedford is half way between Harrisburg and Pittsburg.

Time of the show: 9am - 4pm

Format of the show: The show will include talks and demonstrations by well known QL personalities and sales by a number to vendors. The show will take place in the main dining room of the restaurant and lunch is included in admission to the show. After the show a banquet will be held at the same restaraunt at 6 PM Saturday evening. All the newest QL hardware and software will be there to see and purchase.

Admission Fees:

\$12 per person if you notify Bill Cable in advance

\$15 per person at the door

This includes admission to the show and LUNCH and general refreshments throughout the day.

Recommended Motel:

Super 8 Motel

Bussiness Rte 220 N

Bedford, PA 15522

Phone : (814) 623-5880 FAX : (814) 623-5880

Also at Exit 11 of the I-70 & I-76 Interstate at Bedford
Rates : Double occupancy with one double bed \$40.91
Double occupancy with 2 separate beds \$44.72

When you make your reservation mention Bill Cable and the QL show to get this special rate. The rate is per day. There are 57 units, Exercise equipment, HBO, Free local calls, waterbeds, children under 12 free.

Recommended Airports:

DULLES International Airport Washington, DC

(This is about 2 1/2 hours by car from Bedford).

Pittsburg Airport (About 2 hours by car to Bedford).

Harrisburg Airport (About 2 hours by car to Bedford).

There will be a dinner gathering 6 PM Friday night also at the Carriage House Restaurant. Those flying in to airports and needing rides to the show please contact Bill Cable and every attempt will be made to connect you with a local QL person going to the show who can meet you and give you a ride. Likewise, QL people driving to the show who would like to give a ride to a QL enthusiast from far away please contact Bill Cable. This is the 5th annual North American QL show. It is being sponsored by NESQLUG (The New England Sinclair Users Group) and all details are being handled by:

Bill Cable

NESQLUG Director

RR3 Box 92

Cornish, NH 03745

USA

Phone: (603) 675-2218

E-mail: bcable@coat.com