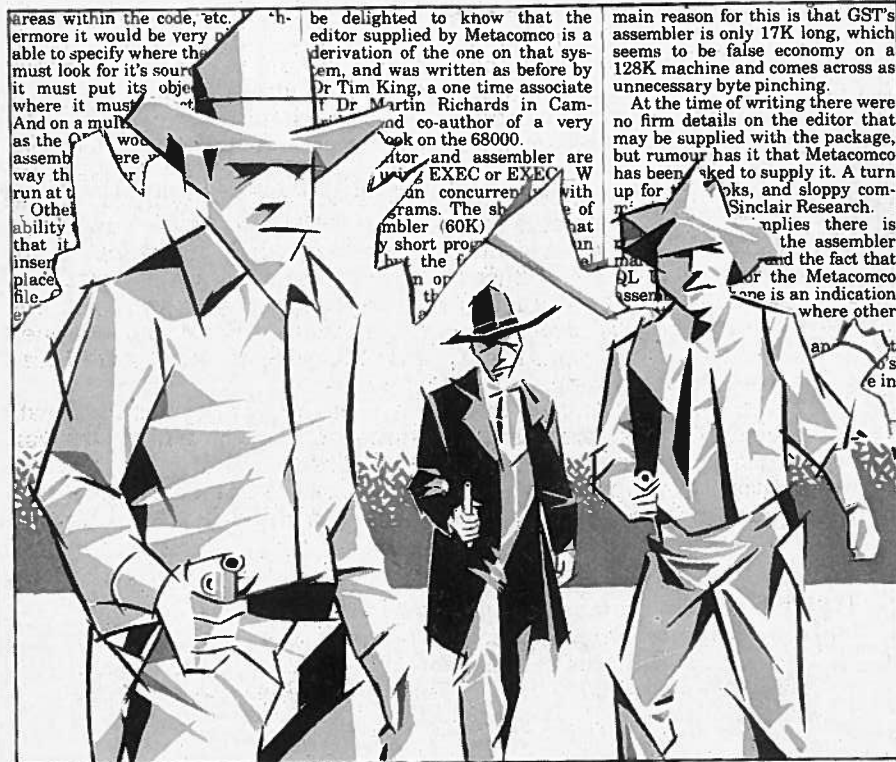


# Gunfight at the



## GST Corral

*'The word was out - Doc Fenton and the GST marshals were gunning for that Denning boy. The row about last month's review meant the time for talking was over. There was only one way to settle it now ...'*

Last month, the reviews of GST's assembler and 68K/OS stirred up quite a reaction at their Cambridge offices. Subsequent correspondence revealed several aspects of these products which went unmentioned and it was clear that a reappraisal was in order.

So, to clarify matters, Adam Denning re-assesses the assembler and GST remark upon some features of K/OS... The 68000 assembler comes on a microdrive cartridge along with a reasonably large manual and can be started either by using the EXEC / EXEC\_W commands or by loading and running the boot program. Also included on the cartridge are a number of utilities to help the programmer. One of these is the Metacomco screen editor, which may not have been GST's first choice. Along with the editor are two very large files containing all the QDOS trap keys, system variables, equates, offsets and masks. Any of these can be used during assembly with the INCLUDE assembler directive.

Other files supplied are the aforementioned boot program, a cloning program and a small collection of library routines. The latter can also be included in an assembly if required, or the library can be extended to include user-written subroutines.

When the assembler is run it first opens a small window and asks for a console definition to use. Pressing ENTER alone causes the system to use the default of CON\_. The heading is then printed and a prompt appears asking for the command line. This method of invoking assembly still seems a little unfriendly, but then it's really a matter of what one expects.

The command line is used to tell the assembler what file to assemble, what listing to produce, where to send any listing and so on. Numerous assembler options can also be included here.

Once assembly has been started it ends very quickly - this assembler is extremely fast! As files to be assembled must be postfixed with .asm and the resultant listing and binary files normally have extensions of .list and .bin respectively, the command line could be as simple as mdv1.asmtest, as the defaults would be used in each case resulting in a code file called mdv1.asmtest.bin and a listing file called mdv1.asmtest.list.

Naturally enough, the user is able to alter this in most respects.

The listing produced is fairly standard, giving a heading and the resultant hex code; though it also includes the time of assembly and a full symbol table listing at the end of the assembly. Contrary to our earlier reports, the assembler also produces error messages - very comprehensive ones in fact. Indeed, considering the price of £39.95 and the fact that it can theoretically assemble larger files than Metacomco's, it's difficult to recommend one over the other.

### Featuring K/OS

Many prospective purchasers of QLs are more interested in raw hardware power than SuperBasic or Psion software. These users will be writing software for themselves or to sell to others as a turnkey system. Here, 68K/OS is a serious proposition, because it offers a lot of features QDOS doesn't have.

The first thing noticed when running 68K/OS is that the hardware power is much more impressive. Microdrives run faster, programs load quicker and the response is much faster. The main feature, however, is the windowing facilities. Each task under K/OS has its own window that the user can expand or shrink up and down the screen as is seen fit. Each horizontal window can be split vertically into further sub-windows - it's not quite up to Lisa standard, but it's still very flexible.

The editor uses between 2 and 4 separate windows; one for the main text, a single line window for the ruler line and a menu window on the right-hand side which can be removed when the user is familiar with the commands. Other menu windows appear after a help key prompt.

The multi-tasking is a delight to use. You can run two copies of the editor or transfer information along 'pipes' from one file to another. For example, selecting blocks from a standard file and merging them into a letter is easy. 68K/OS also offers full multi-tasking. Once there were 15 separate tasks running, which is more than enough for any practical application. The only real limit is screen size.

A lot of the programs use a standard menu facility which is actually built into the operating

system. This means using the menus on the standard products is easy because the control commands are all the same. Users can write programs to call the menu handler which reduces the code to set up a menu to a few lines.

On the negative side there's not a lot of software available for 68K/OS yet. GST have an assembler on microdrive (a ROM-based version will be available at the end of the year) and a word processor. They expect to get C, Pascal and FORTRAN up early in 1985.

Another slight irritation is that QDOS and K/OS tape formats are not compatible. GST said that this was essential to improve microdrive performance but it is a pity all the same. A utility will be

available to read and write QDOS files under K/OS, but it would be much easier if the two formats were compatible.

Supplied on a small board, 68K/OS plugs into the expansion bus, with a switch that flicks from QDOS to K/OS. The board has two slots for ROM software (such as the assembler) and comes with a microdrive cartridge with 12 utilities. Users can easily blow their own programs into ROM and put them onto the card, giving instant access to programs.

Generally the purchaser who wants to run standard software won't find K/OS of much interest, but for software developers with the QL in mind it is well worth a look.

## GST Computer Systems Limited

91 High Street, Longstanton, Cambridgeshire CB4 5BS

Telephone: Crafts Hill (0954) 81991 Telex: 817057 (GSTUK G)

The Editor  
QL User Magazine  
Scriptor Court  
155 Farringdon Road  
London EC1R 3AD

24 October 1984

Dear Sir

I read with interest your article on 68K/OS in last month's QL User. There are some basic misconceptions in the article which I must ask you to rectify.

1. 68K/OS is not seen as an alternative to QDOS. It is intended for the serious software writer who doesn't want SuperBasic or Psion software and wants to develop his own software.
2. The article fails to mention the advantages of the features of 68K/OS

- full genuine multitasking
- full generalised windowing
- improved speed and microdrive performance
- built in menu handling
- compatibility with Motorola Pascal and Assembler

No-one else who has seen the product has expressed any negative view at all and we hope your readers will look at the product themselves before they decide.

Yours faithfully

*Dr J S Fenton*  
Dr J S Fenton  
Technical Director

Directors: J.S. Fenton MA, PhD, L.F. Fenton, R.M. Keyworth LLB

Reg in England No: 1426456 Reg Office as above VAT Reg No: 249 9038 91