

WITH thousands of programs on the market *The Micro User* can review very few of the products that might take your fancy. Consequently I am devoting this month's column to the subject of reviewing business software for yourselves.

While accepting that no shop allows one to borrow a program for the 6 to 10 hours of testing which a major system such as this month's product requires, certain questions must still be satisfactorily answered every time you feel tempted to take out your chequebook. They are:

- Is the task appropriate for a micro?
- How long will it take to install and master the system?
- How much will the system cost – both directly and indirectly?
- How reliable will the system be?

After examining each of these in turn we will look at an unusual product to see them in actual practice.

The BBC Micro is a first rate micro, but we must remember its original purpose. It was not designed to be the most user friendly, most cost effective, most capable or most anything computer available – with one exception. I could suggest at least five examples of products which are significantly better than the BBC Micro for each of the parameters listed above.

The exception is that Acorn aimed to maximise the market potential and therefore made the BBC Micro suitable for the widest variety of applications. Consequently in designing the most flexible machine available at that time the BBC Micro became all things to all men.

Such flexibility makes many users believe it capable of tackling most commercial tasks. This is only partially correct, since there are systems I would hesitate to place on any micro and there are systems which are better suited to other micros.

What is more, further doubts have nothing to do with the speed, disc handling, keyboard or basic design of a BBC Micro but are based on the organisations using it.

Consequently when examining business software the first thing I have to decide is not whether it is performing its designated task well, but rather whether this task is worth bothering with. Although my misgivings can stem from a variety of sources there are four main ones:

- Too many systems are marketed which require several hours to set up and are used for only a few minutes a month. The effort to convert to micro is just not worthwhile. It is also easy to forget that a system which is infrequently used, and then only briefly, requires extra operation time due to lack of familiarity.
- Other tasks are unsuitable for businesses with a manager who is the only computer operator. Tasks such as cheque reconciliation can be delayed a couple of weeks in order that holidays may be enjoyed,

## Taking a long hard look at software

though if nobody else can run the payroll the weekly staff will not wish you an enjoyable fortnight on the Algarve.

- Many systems, particularly stock and financial, are converted from larger, more powerful micros and the BBC Micro is not up to the task. The advent of the Master series may make this less of a problem.

- Occasionally tasks seem like a good idea, but in practice are rarely kept up to date once the novelty wears off. Some diary or personal memo systems fall into this class.

Using these criteria it is easy to understand why I can not recommend every user friendly, slick and reliable program sent for review.

Every firm develops its own way of working. A family concern founded by one's grandfather will not handle its buying the same way as one set-up a couple of years ago by a manager investing his redundancy pay-off. Consequently a purchasing program which is ideal for the former may be unsuitable for the latter. This has nothing to do with bugs, file sizes, unreliability and the like. It is solely due to each firm's operations.

Converting to a computerised system requires a delicate compromise. On the one hand, while every opportunity should be taken to optimise the systems used the novice computer manager must resist wholesale changes unless pressing reasons exist why these must be undertaken.

Put another way the businessman still needs to spend his time managing the organisation, not wasting it becoming a hacker. Consequently the system chosen should become part of the working practice with the minimum of disruption. This may well cause elimination from any shortlist of many fine products.

On the other hand the computer system chosen must stay in place for at least three years and preferably for five, unless the nature of the organisation undergoes major changes. Therefore it must not be such a perfect fit that there is no stretch available to accommodate the growth you hope to enjoy during this period.

A couple of years ago I came across a frightening set of figures. Although applying to mainframe computers two of them should still be kept in mind.

Firstly, the total cost of a computer system will be double the cost of the hardware once the cost of programs, training, ancillary equipment, materials and

**JO STORK shows how to be your own software reviewer... then puts his precepts into practice**

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so on are included in the final bill.

Secondly, if an organisation relies on a computer system it will ultimately cost the equivalent of 40 per cent of the annual turnover to replace all the data were it to be lost.

It is easy to be misled by the sales patter into thinking that only a couple of hours will be required before enjoying the software's benefits. This may be no more than marketing licence or it may be true. Even assuming that the Trades Descriptions Act is not being shredded many organisations will require far longer due to its being better suited to different commercial procedures.

Remember that assuming you rate your time at only £6 an hour and it takes a very reasonable 20 hours to computerise the manual system you will have invested the equivalent of a disc drive.

On the other hand cheap-skating the preparation, particularly back-up procedures, could cause you to fall foul of the second figure. This is why I now never develop systems which permit an exit before back-ups are taken. Granted losing all the data is the very worst case possible, nevertheless there are few companies that could survive such a total loss and all will be embarrassed by even a partial loss.

Consequently I am not concerned whether some package costs £10 to £15 more than its competitors since the actual program is a relatively trivial part of the total potential outlay.

It may surprise you that the reliability of the system comes lowest in my order of precedence, but the reason is simple. You cannot have failed to read in recent months that a considerable number of systems have been withdrawn from the market until their bugs were fixed. Some of them cost £700. Most of these gremlins were minor and occurred only in unusual circumstances, but even so they demonstrate the pressures facing software houses.

If they delay marketing while more testing is carried out their competitors not only steal a march but the development costs rise with no real guarantee that every bug has been eliminated. There is nothing like a 20,000 user base to take programs into backwaters which the designers never envisaged.

Accepting only 99.9 per cent reliability is in fact no cause for undue concern. Providing one does not try to shoe horn an inappropriate program into an organisation - as this greatly increases the likelihood of visiting previously uncharted waters - there is little risk since the better software houses will not risk their credibility by marketing grossly unreliable software. Furthermore they respond very rapidly to any anomalies one discovers.

The question of reliability is therefore much more a question of an organisation's ability to use the facilities the programmers coded rather than worrying whether this code is correct. This brings us neatly back to the prime question: Is the product right for your needs?

If you apply these principles you will not make any costly mistakes. The following review will serve as an excellent example of their use.

## System Delta passes all the tests - and then some

*Product: System Delta*

*Price: £64.95 (inc. VAT)*

*Supplier: Minerva Systems, 69 Sidwell Street, Exeter, Devon EX4 6PH. Tel: 0392 37736*

THE average calculations used in business are within most people's mental arithmetic ability, being little more than simple manipulation of two numbers. While it is certainly true that the majority of organisations have to perform large numbers of such calculations it is equally undeniable that if that was all a computer could carry out most would do better employing a school-leaver with CSE maths and an HB pencil.

Processor speed, Basic instruction set, character set and keyboard layout including function keys and the peripherals available are all vital micro performance criteria, but far more important to the businessman is its file handling. I therefore tend to look at the data storage, retrieval and manipulation of a computer more closely than any other of its performance characteristics. Consequently anything which improves the data handling performance of your computer must be attractive.

The first of my criteria - Is the task right for a micro? - may be completely reversed by the addition of improved filing because this is normally the weakest element in any micro's performance. Money spent on System Delta, which achieves this highly desirable objective, could become one of the most cost effective investments you have ever laid out, by enabling it to handle previously impossible tasks.

System Delta, from Minerva Systems, may be used in one of two ways, since its heart is a 16k ROM giving over 80 extra disc, file and record handling commands.

At its most basic level you may use a file handling package which Minerva calls Card Index. It is to be applauded for a nice line in understatement as most other software houses would be advertising it as an all-singing, all-dancing database offering a full range of data handling facilities.

Many users will find that Card Index is all they will ever require, since it was only when I began to experiment with the most outlandish and exotic record designs my imagination could devise that I occasionally found a limitation. For the average debit-credit-plonk membership or household application this database ranks with the best, providing every facility that is ever likely to be needed.

At its most sophisticated level System Delta can be used by systems developers to produce applications

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of a complexity and sophistication which could challenge much more expensive computers. In fact I rate it so highly in this area I hope software houses will be able to come to some licensing arrangement with



Minerva, thereby permitting them to develop exciting new products for those users not willing to create their own systems.

Even the briefest list of facilities indicates the power of the system. One can randomly or relationally access up to 8000 records and up to five files simultaneously at any time. These records can have 250 fields and fields may be up to 200 characters long.

Add to this the powerful sorting, mathematical and conditional possibilities, and you begin to see that even applications such as stock which are anathema to most small micros become respectable possibilities.

Card Index is well within the capability of a BBC Micro and if you have the time or inclination to write your own programs it greatly expands its capabilities. Consequently against the first of my selection criteria I regard System Delta as having passed *summa cum laude*.

Regarding my second criteria - the time to get your job up and running - I can not give a simple answer. If all you require is the Card Index then studying the 70 page manual, fitting the ROM and practising with the associated demonstration disc will take three to five hours.

Unfortunately while the basic operation is by menus or cursor movements there are also a fair few Ctrl + key commands to master, which tends to slow down the early hours of application creation. You can put a Help list on the screen if needed, but this greatly reduces the amount of any record that can be displayed.

This is not to imply that the creation time is unreasonable or that the system is not user friendly. It is just to acknowledge that unless you have a

photographic memory it takes time to remember all the possibilities available in a very comprehensive system.

I feel that the final figure will depend on whether you can devote a single lengthy session to learning the system or whether it will be bitty and irregular. Potential users should budget for at least a further five to ten hours in this area. Once the structure is created data handling is exceptionally simple.

This leaves the issue of the time the actual design of the application itself will require. While this may take several further hours, whether using Card Index or developing your own system, I have little doubt that this time will be less than with virtually every other database I know of. This is because one of the biggest problems which micro systems designers face has been removed - that of finding a compromise between:

- The number of data records which may be created.
- Number of fields in each record.
- Length of the fields themselves.
- Degree of arithmetic that may be performed on these fields by the database software itself.
- Sort and search facilities to be used.

All too frequently you have to reduce the size of the record in order to be able to handle more of them. With many databases relying on all the data being held in memory the outcome is impoverished attempts at pouring a quart of information into a pint sized memory.

Since System Delta need hold only a single record in memory at any time this whole compromise



The main menu

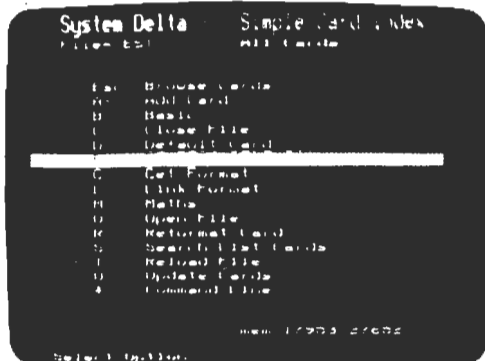
disappears, with the result that not only considerable design time can be saved but you can also have the precise data structure you require.

Where memory is not a constraint more records may be retained in memory, resulting in a form of poor man's cache memory. System Delta optimises this for

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you automatically. In short, the person who finds this package's limits a problem should not be using a BBC Micro.

Adding all the times for the separate stages together I would definitely give System Delta a pass mark. How



The data manipulation menu

well it passes depends on the size of the filing task – the bigger the application the higher my rating.

The question of how much the system will cost is again dependent upon the use to which it is put. At



The data manipulation screen

£64.95 Card Index is very competitively priced. Even a further £19.95 for the Reference Guide, a 160+ page book for the System Designer which describes the extra data handling commands that the ROM allows, does not change this view.

The true cost will however be considerably higher. It will depend upon how much you charge for your own time, and yet conversely this is where the greatest savings could occur. Using the full features of System Delta or even just the Card Index to get the application precisely matched to the requirements may take 40 man hours, but the eventual operational savings could be very significant. Once again System Delta gains a pass, although it should be clearly understood that if you have only a minimal application this does become marginal.

On the final point of reliability it passes. Since patching a ROM with a bug is virtually impossible – replacement being the only practical possibility – flaws become even more critical in systems such as this. Consequently part of the reasoning being my testing with extravagant data designs was to visit as many backwaters as possible.

The only funnies I discovered were soon traced to operational errors while familiarising myself with the system. Had I spent more time with the tutorial disc these would not have occurred.

Several points should now be evident. The main one is that having set four stringent criteria against which any software should be judged I must unreservedly recommend a product which so clearly passed them all. Nevertheless there are other issues which make this recommendation even stronger.

The first is the question of speed. This could only be adequately tested by producing a huge file and then manipulating it. Not wishing to squander my life in boring data entry I wrote a tiny program to load 1000 random records into a typical file. The speed with which they could be retrieved or sorted was first class.

The second is the matter of flexibility. This did not form part of my key conditions since even if a piece of software is extremely rigid it might still fit your organisation like a glove.

Naturally I looked at the product very much from the viewpoint of commercial applications, and yet it must be clear by now that since System Delta can be regarded as a major enhancement to the disc handling of a BBC Micro since it is suitable for any disc-based application, whether scientific, commercial, mathematical, sociological or whatever.

Finally a word of caution. It is pure coincidence that the product I used to highlight the consideration when selecting software proved one of the finest I have met.

Looking over the shop shelves and remembering systems I have had the misfortune to encounter suggest you prepare yourself for the sad fact that 50 to 70 per cent will fail on at least one of them. Fortunately the BBC Micro is one of the better endowed machines as far as software is concerned, so this still leaves a large quantity of good, reliable and appropriate software for your organisation.

Jo Stork