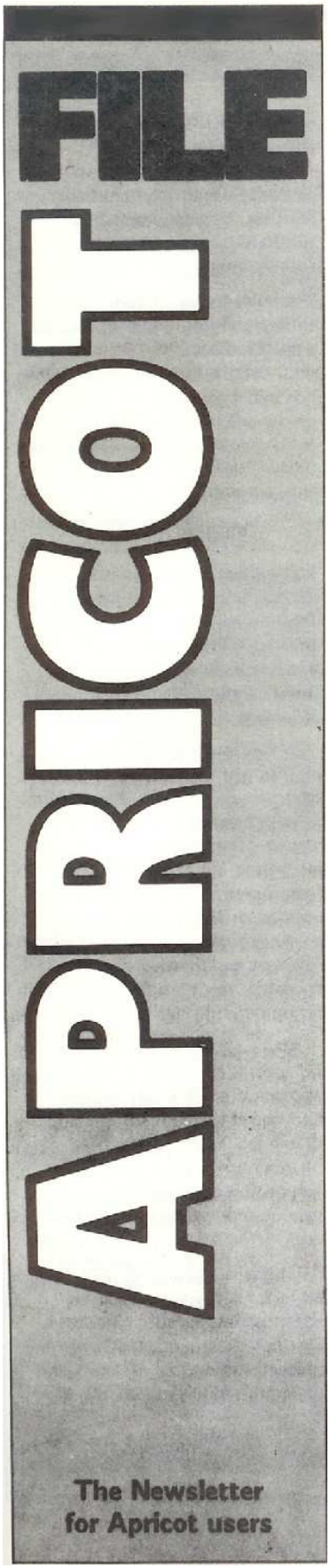
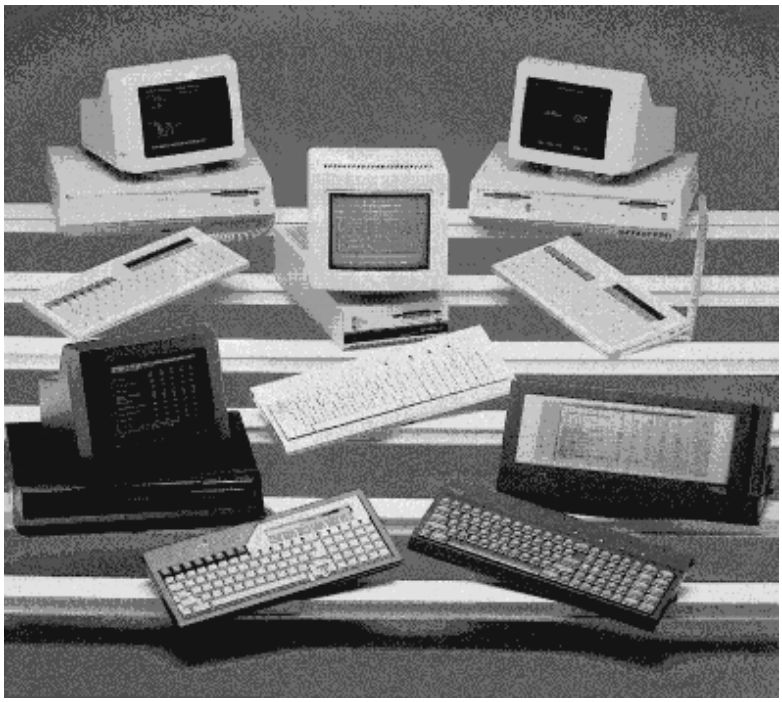


Apricot File 2_4



Scans courtesy of www.actapricot.org

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Many additional thanks to Eddie Bromhead for scanning all of Release 3, 4 and extra inserts.

Release 2.4

FILE APRICOT

The Newsletter for Apricot users

January 1987

Apricot by another name

Convert your Apricot into an AT!

By Henry Deckhand

"This is the news all our users have been waiting for" declares Roger Foster. "It reinforces our total commitment to the ongoing development of the user base ... This product now gives our existing users a very clear future with Apricot ..." And more of the same.

Actually, the existing users with a very clear future don't include the 30,000 or so F series owners. That's because the subject of all this excitement was Apricot's enthusiastic pre-announcement of "a unique scheme" which "will enable over 100,000 users of the Apricot PC or Xi to convert to full IBM AT compatibility". It's a conversion package called PC-286 which should be available this Summer (the dealers were told May, the press release says June, past experience proposes a date sometime in September). In short, it involves stripping out the guts of your Apricot and 'modifying' both the keyboard and monitor. The plastic case should remain more or less the same.

The key bit is replacement of the motherboard. The newcomer gets an Intel 80286 and uses "extensive" surface-mount technology, described as "very advanced". There'll be 640KB on the board, and built-in network interfacing as well to simplify and cut the costs of moving on to an Apricot network. The PC-286 will also come with Windows.

It seems that advancing the frontiers of surface mounting is what prevented Apricot from including the PC-286 conversion in its parcel of Xen-i announcements last June. That might have mitigated the chorus of disenchantment from Apricot owners at the time, but the company says it just couldn't do it cost-effectively. Reading between the lines, it now looks as though they have figured out in principle how to convert a PC into an AT without charging the earth for it (hence the announcement) but haven't actually done it yet in practice (hence the delay) but think it's about time they showed some good faith (hence the announcement).

"A PC or Xi with the PC-286 will be a stunning machine" said Mr Foster, which might make you wonder why he bothered with the Xen at all. The price — around £900 — isn't bad; certainly you can't buy an AT-lookalike for that money. Not yet, at least, though the way AT-compatible prices are going there may well be a decent sub-£1,000 AT-lookalike by the time the PC-286 is ready to ship ...

The upgrade will confer drawbacks as well as advantages. The rear I/O sockets will change: the RS-232C port changes from a female DB25 (25-pin) to a male DB9 (nine-pin) à la AT: the parallel becomes IBM parallel rather than Centronics — a female DB25 which rather dangerously resembles the RS232 socket we have come to love.

So all your peripheral cables will require surgery. Even the keyboard socket changes, permitting the connection of a real IBM AT keyboard to your bastardised Apricot. And doubtless some poor soul will plug his/her modem into the printer port and wonder where the smoke is coming from. Such is life.

Altogether, some 20 keytops will be replaced on the keyboard. The eight grey function keys and the six MicroScreen keys will become 14 IBM function keys (though IBM itself is only up to 12 function keys at present). Useful scrolling keys like PageUp, PageDown and End will appear as well.

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PC-286 conversion

Old-style peripheral cards such as the Integral Modem or external hard-disk interface cards won't become redundant, however. As with the Xen-i, PX adaptor cards will permit the use of old cards in the 'new' machine. The external XP box, capable of holding up to four full-size IBM cards, will also be connectable.

The actual disk drives will be retained, but obviously the drive controller electronics will have be changed if the PC-286 conversion is to read and write IBM-compatible disks. So you should be able to retain your disks ... but you might not be able to read any existing Apricot-format files on them. At least IBM's endorsement of Sony-type 3.5in microfloppies means that the major software suppliers will be selling their programs in a readable format in the very near future; and Apricot says it will be compiling a directory of suppliers with Apricot software who can also do IBM-format versions on 3.5in disks.

Another upgrade offer

Meanwile, in another typically magnanimous gesture to the 80,000 or so owners of non-Xen Apricots **Apricot Computer Maintenance** is offering what's described as "an upgrade which will help users cope with their growing data storage requirements" — any PC or Xi can be upgraded to a 5, 10 or 20MB disk, and a single-sided floppy machine can be converted to a double-sided version.

Machines will need to be returned to Apricot (carriage free, though) and upgrades will take "two to three days". You'll get 90 days' warranty on new parts. Details and prices from **021-552 1555**.

Menu-driving Xens

Apricot has won a contract to supply 326 Xens for the Ministry of Defence, to be used by the **Army Catering Corps** as standalone stock control systems. Apricot won the contract against five other companies for three reasons: price, Britishness, and the fact that the Army already has some Apricots. The contract adds **£1.4 million** to Apricot plc's balance sheet.

The software comes from **XI Data Systems** of Leeds, a supplier which specialises in the catering trade. Naturally, it's all menu-driven ...

Apricot says it's producing between four and five times as many Xen-is as Xens, but that still leaves quite a few Xen users. And the Army expects five years' use from its machines, which must give some heart at least to those brave spirits who bought before Apricot announced the Xen-i.

Within the five years, these Xens are expected to pay for themselves "five times over" from savings in order processing, inventory control and standardisation of menus (for food not software) and ingredients. By April 1988, some 250 Xens will be up and running in the UK: then the Rhine Army and the further reaches of HM forces will get them, all of which will have "a profound affect upon the production of 250,000 meals a day".

Apricot also has the contract to maintain this hardware. (We were told, incidentally, that Apricot maintains all the xi systems in the Royal Navy Fleet Auxiliary vessels and carried out repair work on an xi off South Georgia.)

Interestingly, the Army told us it plans to have standalone computers operating at a much lower level — perhaps one per platoon. Rather than going for networking, the Army seems to be adopting the safe approach of individual computers: apart from the practical problems, this route allows greater flexibility than at present without the constraints placed on regimental independence by a coherent networked system.

Micro Focus adopted

Apricot has given **Micro Focus** its seal of approval in offering the latest versions of that company's Cobol compiler and development tools on all current products, include networks. Micro Focus reported a loss last year after being one of the Stock Exchange's high fliers, and the six months to July were still in the red — though a loss of **£500,000** compares with a whopping £2.8 million at the 1985 midpoint. Sales were virtually unchanged at **£5.6 million**. Micro Focus is talking optimistically about "a revival of market opportunities and a return to the prospect of growth" for 1987.

Duff Xens

Intel has apparently told Apricot that the 80286 can hang during an interrupt acknowledge because of electrical noise. The solution is a daughterboard in the 80287 socket (current shipments are going out with one of these) or some resistor-soldering under the motherboard.

And it seems that two dozen of Apricot's entry-level Xen-xi systems were shipped with the wrong IO.SYS — they can't read 720KB floppies. The correct version is numbered 3.20.1 and dated 28/8/86; your dealer should be able to help, but you can tell him the right IO.SYS is on Release 2 of the 3.5in system software pack or Release 3 of the 5.25 software.

Apricot founders

Not the company, of course, just the £250,000 trimaran it's been sponsoring for two years. The boat hit something 24 hours into the Route de Rhum single-handed race (Brest to Guadaloupe) and didn't make it back to port — *Apricot* ran on to rocks less than a mile from Brest and was broken up. Skipper **Tony Bullimore** escaped.

Engineering systems

A recent survey of 655 firms in *Engineering Computers* magazine suggests that Apricot is the second largest supplier of computers to this sector. Of the 23,900 micros in use in the sample, IBM supplied 7,500 and Apricot 2,700.

Apricot User revisited

When Apricot switched to IBM-compatibility, VNU Business Publications killed off its glossy free mag *Apricot User*. Apricot decided it still wanted a user-oriented publication, and invited proposals from other publishers (including us); and now we hear there will indeed be an advertising-based freebie called *Apricot Systems* ... published by VNU. It will appear at the Which Computer Show in February with a controlled circulation of 20,000 names described as "people who have stated in writing that they will be buying a new computer system in the very near future". Which presumably cuts out most of *us* ... Reportedly, Apricot itself isn't paying for this directly; but obviously it will be buying a lot of ad space in it, and we hear the company might take 10,000 copies to send to its own prospect list. ◆

Workshop Reprise

Bandage & Plaster

The story continues

By Bob Smith

This piece relays the response to my article in last September's APRICOT FILE on backing up files. As readers may recall, I offered to send the example system to any subscriber who wanted it.

One thing I certainly learned is that I am not alone in suffering a fatal crash — some four or five respondents had either experienced a hard disk collapse or come very close. A number of people also made further suggestions for the 'complete backup system', and to them I would like to say a public thank you. (Because of their contributions, I now feel like some sort of guru on the subject!)

Here are some of the suggestions.

Logging backups

Geoffrey Carroll described his method of logging a dummy file entry when running his backup BAT file. These entries would have names that corresponded to the directories backed up so that a DIR would then show date and time of the last backup done. For example, when backing up files in the directory \SW\BOB, you could include ...

```
ECHO LAST BACKUP > SW-BOB.BU
```

The phrase 'LAST BACKUP' would be written to the file SW-BOB.BU by the redirected ECHO command. Even if SW-BOB.BU existed previously, it would be overwritten and the date/time stamp updated. A DIR *.BU would then produce a list of all the latest backups.

I've adopted this tactic myself, with two small extensions to the idea. The .BU file is renamed to .BU2 (the existing .BU2 is first deleted) and the text written to the .BU depends on the type of backup being performed — either 'New/Updated files' or 'All files'. The .BU2 files then mark the *second last* backup, which neatly records the two diskettes I use and rotate for each saved directory.

A new menu function called LOG also runs SDIR to produce an alphabetical listing of the .BU files. This list shows both their date/time stamps and, by looking at the length of these files, the type of backup — 19 bytes for 'New/Updated files' and 11 for 'All files' — it adds two bytes for line feed and carriage return. (Knowing the appropriate length saves having to take the further step of TYPEing the file contents.)

The obvious drawback to this type of logging is, of course, that you could lose this record if your hard disk crashes. On the other hand, you could either ensure the BU files are created in the subdirectories themselves before backing up (mine are all in \BAK) or modify the backup .BAT commands always to back up \BAK as well.

A third option is to log the BU and BU2 files direct to a separate diskette kept for only that purpose and interrogate this disk when one wants to check the log. This alternative would keep the BU files from cluttering up a hard disk, but would be slightly less secure since there would be only the one copy of these files.

Want another variation? Create the BU and BU2 files as above, then rewrite the backup diskette's volume label. This would effectively date/time stamp the last backup on the diskette concerned. You could do this with the public domain utility VOLSER (on DEALS FOR READERS disk AP002) by including the following in your batch file:

```
ECHO BackedUpOn > VOLUMEID
VOLSER B: < VOLUMEID
DEL VOLUMEID
```

The above is necessary to prevent VOLSER stopping to request a label. It won't accept the label name with the drive letter, but it can be input through redirection from a disk file such as VOLUMEID above. Note that the label name written to VOLUMEID by the ECHO line must not be more than 11 characters long.

Subdirectory sizes

Tony Weyman sent me a disk called 'The Backup Toolbox' which included his QBACK.BAT (which uses KNEW) and a couple of other goodies which directly addressed the weaknesses I'd already outlined in the article. (Tony has also previously contributed to APRICOT FILE, most notably on undeleting files, and is the author of many of the proprietary programs on OmrC's ScannerS disk reviewed in APRICOT FILE Release 2.2 — such as DISPLAY, LIBRARY, SLICE, and TRANSFER.)

Tony's BLOX program performs the same service as the SDIR in my backup routine — to check the size of the directory about to be saved — but in a much less cumbersome way. It tots up the files using a 1K cluster size, then displays a message telling you whether it's safe to back up (which is the case when you are under the 720KB capacity of double-sided disks). If you are over the limit, the amount of memory to remove is shown along with a warning beep and the ERRORLEVEL is set to 1 for testing in a BAT file (it's 0 if it's OK to copy).

(By the way, 720K is not actually the true usable capacity of a double-sided disk — it should be 711K. My own warning message after SDIR should be amended to '178 blocks' ... and even that is a quarter of a block too big. Sorry.)

Checking for the right backup disk

The other problem concerned the possibility of putting in the wrong backup disk, one for a directory different from that which you intend to save. Tony's VOLID and BAT programs combine to reduce this problem.

VOLID labels a disk with a name split into two parts. The first eight characters should be the first eight of a subdirectory name up to the last

backslash: so for \SW\BOB the name would be 'BOB'. The last three characters could be used for anything else — in my case '1' or '2' to identify which of my two backup disks.

Tony's BAT is a much more general program with many switches and is intended for use within .BAT files. Tony added the BAT V switch to check that the diskette in drive B was the correct one for backup, by comparing the first eight characters of its name with the last eight characters of the current subdirectory path. If a match, no action. If not a match, a warning message is issued with a 'Continue? (Y/N)' prompt. The ERRORLEVEL number is set according to the answer so that it can be tested in the BAT file.

Taking the medicine

I have adopted all of the above in my own backup system, but am afraid that, apart from BLOX, they will not be released into the public domain. Tony is currently taking all the bits he has developed and wrapping them up into the ultimate backup program. From what I've seen so far, this software would be worth looking out for. Being a single program, it ought to have the advantages of both compactness and speed.

Finally, with all this re-examining of techniques, I took the opportunity to refine further my own system. I reduced the four menus to one and rewrote the KXX.BAT files so that all the common code (90 per cent or so) was contained in one common KBAK.BAT file which was executed from the other now much smaller KXX.BAT files. (This technique allows any further change to be easily accommodated, since they would need be only applied to the KBAK code.)

The wonders of DPATH

Tony Weyman also sent me DPATH. I have now replaced SmartPath and can report that DPATH works fine — much better, in fact. For instance, DPATH can pick up dBase II overlays and sometimes data files in other subdirectories. SmartPath cannot do this.

It works in exactly the same way as SmartPath (see the review in APRICOT FILE June 86 and my letter in the August issue). It is shareware, written in this country, and well worth the effort of getting if you use a hard disk. *(And a very similar product called* DPATH30 *is on our* DEALS FOR READERS *disk AP018 — Ed.)*

I recommend people use it by putting DPATH.COM into the root directory, then adding two lines to AUTOEXEC.BAT to ensure that SuperWriter is always available. (You could just type these direct or place them into another batch file that you run when you need it, for instance not only to set up the path but also call SuperWriter.) The following assumes that the SuperWriter directory is \SW:

```
PATH=A:\;A:\SW
DPATH=A:\;A:\SW
```

To check current settings, just enter 'DPATH' by itself; to clear current settings, enter 'DPATH=;'.

Always keep the settings for PATH and DPATH the same and you won't get into trouble. If you stick to this, you can also check current settings by typing 'SET' which will display the 'environment' — a 128-byte area of memory where MS-DOS keeps some specification information, basically the COMSPEC (the full specification of COMMAND.COM) and the current PATH and PROMPT settings.

Sometimes data files can also be picked up through DPATH. I find that getting XQT files from other directories is no problem. An extremely useful utility!

Health Care revisited

I was delighted to see Neil Mathers' contribution to the backup business in Release 2.3. His routines are a marvelous exploitation of the hidden power of MS-DOS batch commands and are as instructive as they're useful.

One or two minor gripes, though. Firstly, on drawbacks with my system. He says a "separate KDE.BAT or equivalent file must be present in each subdirectory". Not so. All the backup BAT files are in the subdirectory \BAK. It's true that "later changes to the structure of the BAT file" would be "a nuisance", which is why I have revised the structure as mentioned above.

Neil also says "the existing routine backs up all files in a given subdirectory". Nonsense — it will do so only if the backup BAT command is run with the parameter A, but otherwise the usual backup copies only the new/changed files. These are likely to be only data files, and program files are simply not copied. So the only "additional processing time" is normally for KNEW's comparison of directory entries; certainly not for copying as Neil claims.

Besides, if one uses SmartPath, or better still DPATH, to separate data from programs (as I mentioned in the article) it's only the *data* files that are being checked for potential copying.

As for the criticism about using more disks than are strictly necessary, this really comes down to how well you organise your subdirectories to get the best compromise between fullness and convenience of use. I plump for the latter every time. A few extra disks (twice — I keep two copies, remember) is worth the extra expense when it allows me to get on with the job and forget whether particular combinations of subdirectories will still fit onto the backup disk. Neil fails to mention this little hazard when you try to put all the files from several subdirectories together on one disk.

To be fair, you need to experience that awful feeling in the pit of your stomach when your hard disk collapses to remove any doubts about the extra disks it takes or the inconvenience of end-of-week backup of *everything*, programs and data, changed or not. The knowledge that it's all tucked away, safe and secure, is sheer bliss. ◆

Doodles by David

Tips and Tricks

From the working day

By David St.John Wallis

Well, great Martin Filmer hath acquired an 8089 and it runs at 24mHz according to Norton Utilities' SI.COM (System Information). But rather irritatingly it does produce three screens. "Nice, we surmise, if you've got three eyes" (*La Boheme*, Act 2).

Friends again

Great news for Nigel Dempster *et al* — co-columnist David Langford and I have kissed and made up; and I have rewarded him with lots of Naira for his ESC.EXE program, which must be one of the finest examples of sheer human ingenuity since the invention of holidays in Lagos. And he's introduced us to the idea of a whole new field of programs with things like SQUIRE.COM, JOHN.BAS and SUNSHINE.EXE. All of these generate superb alternatives to boring things like "Dear Sir or Madam".

Gosh

The DEALS FOR READERS utilities SCAVEN.COM and DT.COM can produce funny results. Both are quite capable of writing to sectors on your disk sectors which they think are bad. I believe this is something to do with encountering too many non-contiguous blocks.

Solution (if you can get hold of the relevant programs): run the Apricot plc utility TES002 and see what that says. Even if that does say you've got some dodgy bits of disk, then run TES005 and factory-format the disk. The chances are that your bad bits weren't so bad after all.

We've got these two tests of course. But we're not really very sure how Apricot would feel if we just gave them away to chaps. All beagles may pronounce, he said hopelessly.

More erudition: CPU.COM is suspect. Norton's SI.COM is better *(available only in IBM format, but it works on Apricots if you can put it on a 3.5in disk — Ed)* although comparing Apricots with IBMs has always been the stuff of dreams or nightmares.

Opinion

WordPerfect may be marvelous but it is slow on an Apricot. A view held by Mike Florey is that things get speeded up if you bung the speller and the thesaurus into RAM.

Also, WordPerfect is correcting its other deficiency — the lack of WYSIWYG. Surprise, surprise: as from last month, WordPerfect's progenitors at SSI won't do this for 100,000 Apricot owners. Did you know what a pariah is? Look in the mirror, my son. One is inclined to take the view that some software people are nurds of the first order. Oh, the sheer waste ...

Pigs flying

Some of us now are beginning to think that just maybe we may have to buy computers that fit the standard set by IBM. Others are beginning to get a bit mad about it all.

So what are we left with now? SuperWriter is still very good, no doubt about it — does things WordPerfect cannot do. Lotus 1-2-3 is better than SuperCalc 3. There are early releases of pretty poor integrated packages and a few accounts programs. You'll still find lots of systems like dBASE, MS- and GWBasic, Pascal, Lisp, Cobol and Fortran and Assembler if you have [a] brains [b] time and [c] more brains.

And of course there's all those vertical-market packages for things like pig-farming. The beady-eyed John Leftwich, the man who said the Apricot Portable was *le dernier cri*, was into vertical packages before being translated into desktop publishing: to Leftwich I say, there's not very much that's vertical about pig-farming. I know: I delivered eight piglets once, and I would describe the process as horizontal. And a bit smelly at that.

Yes, it is gruesome. But no more gruesome than fatheads who bullshit us about how marvelous their computers are, spending millions upon millions in the process and then ensure that the big software houses dump on us from a very great height.

Quickies

If your hard disk is gonna crash, it will always happen at the worst possible time. The solution is to use a good quick backer-upper. Friendly Nigel Grant of Ctrl-Alt-Deli does a very good one, the **DSBackup** reviewed in APRICOT FILE Release 1.10. It's now free of all bugs barring a hint to use function keys 1 and 2; it is quick and safe; and it's cheap — only £59.95 (ex VAT) from a source not a million miles from this full stop.

A bug has been discovered in the Sirius COMMAND.COM when used on the Apricot. It can mess up date/time attributes. You can test this using the KNEW utility from DEALS FOR READERS; sometimes KNEW doesn't work with this COMMAND. Pity, that — it looked promising for a while.

Finally, three notelets. The **NEC V30** processor chip really does work on Portables. There are still a few **10MB Xis** around — at about £1,600, though. **MicroCache** now has a disk read/write buffer (works like its printer buffer and takes time to get used to). ◆

User Experience

Once bitten, twice bitten ...

New Year Reflections

By Alan D. Craxford

Sometimes my retrospectoscope plays tricks on me. It seems much longer than five years ago that I first became interested in computers and what they could do for me. I don't offer the experience that follows as a contender for the *Guinness Book of Records*, but there must be a moral lurking in here somewhere.

I suppose buying the first machine is like buying the first of anything. There is plenty of advice from friends and neighbours (as well as the Saturday salesman down at the store) but the choice invariably boils down to liking that brand's particular shade of black! My first exposure ever to a keyboard was at the Massachusetts Institute of Technology in the late 1970s; one weekend I was introduced to the 'in' pastime for the PDP-11 programmers, which turned out to be a developmental version of the Colossal Cave adventure — and from that moment I was hooked.

Back home I met a Commodore Pet, but those aforementioned influences promised me that this machine was old hat and expensive. My choice gyrated for sometime between the TI/99A and the Spectrum until eventually I chose the TRS-80 Model I. Even this was sold to me on a series of praises and forthcoming attractions; little did I know that the parent company in America had already abandoned its progeny (because of doubts about its electrical safety) in favour of the new Model III.

Despite this I soon found myself immersed in the world of amateur hackers and user groups. From the original keyboard and central processing unit attached to a portable television, my Tandy developed communication capabilities, ran in colour (after a fashion) and acquired high-capacity (720K) disk drives. And while the original operating system was always considered something of a joke, several independent companies sprang up to develop systems and applications software that at that time made the Model I perhaps the best supported micro in the world.

Move on up

But by the spring of 1985 my system was beginning to feel its age. This time I had no doubts that I knew of what the new computer should be capable. Some further good advice was to pick a machine built around the newest processor chip because at least that would promise some longevity. Already there was strong evidence to suggest that the next generation of computers would show more than a little deference to IBM and Microsoft's operating system. And my particular requirements included the need to attach the Polaroid Palette (colour graphics output on to slides) and run a specific version of Symphony.

Like car drivers, computer owners appear to have a particular brand loyalty. In that summer the local Tandy store expanded into a computer centre and developed a liaison with Apricot. Given Tandy's own pedigree it's a little surprising that the store's initial reaction was to extol the virtues of the Apricots. I chose the recently-introduced Tandy 2000, the flagship of the range, which boasted an 80186 chip (a distinct advantage, I presumed) and high-resolution colour graphics. I was also promised a range of peripherals as they were developed and imported from the States.

Time rapidly showed this to be a fallacy and my computing continued unabated on the old Model I. The 2000 did use MS-DOS 2.11 but its unique screen handling required special rewrites of individual programs. Lotus 1-2-3 came as part of a package and I found myself with Multimate as a word processor (which did not support proportional spacing, unlike my Model I's SuperScripsit) and FilePro 16 as a database. I was introduced to public domain software at this time too ... and virtually none of this would run either.

I think the local worthies at AT Computerworld became more tired of me than I became of the Tandy 2000. Beautiful though it was, its main claim to fame lay in drawing a series of fancy demonstration graphs that impressed visitors. The promised expansions and packages failed to materialise; and by the end of the year rumours were circulating of a new fully IBM-compatible machine.

Come on down

At the same time, I was told of Apricot's venture into this market: the Xen. I was given the choice of awaiting the 3000 (with no promised launch date) or taking immediate delivery of the Xen. I chose the latter.

In the meantime, the aged Pet went the way of all printed circuit boards. As this belonged to a senior member of the family it was felt appropriate that we should buy him a new machine as a Christmas present and that it would be sensible for it to be compatible with my computer. AT Computerworld had a special offer for November only — a free printer with an Apricot Portable.

This was what we chose. In due course we found that the printer port failed to work and that there were problems with several of the programs on the ACTIVITY disks. By this time, Dixons were selling off the last of the Portables and AT Computerworld was not answering the telephone.

Instant delivery on the Xen? Demand was outstripping supply for these machines, I was told.

I became somewhat anxious as the weeks went by and I failed to get through to the showroom on several occasions. Then the manager of an AT Computerworld branch one hundred miles away rang to tell me that they had taken over the business arrangements of the North East. He had sketchy notes about my requirements; I had duplicates of all correspondence and was able to show both my specifications and the exchange deal that had been agreed — which was fortunate because the price of the Tandy 2000 had been halved the previous month in view of the imminent arrival of the new machine.

Once again firm promises were made (with copies of the official handouts to verify them) that the Xen would be compatible with the applications I wished to run. There was this exciting new program called Softclone which allowed all IBM programs to run without any user modification. Symphony was promised almost immediately and the Palette system should follow.

Special offers

On the strength of this I took delivery of the new machine, with the option of a second once the first was installed and working properly. The second Xen was to become the nucleus of a research laboratory, linking with measuring and monitoring equipment. With this in mind I had already talked to two suppliers about any interfacing problems. The first machine was my own, a home (hobbyist) computer but which would need to be interchangeable with the one I used at work.

We finally came to a compromise over the Portable after we were unable to get either of the problems fixed: we were allowed to exchange it for an F2 complete with a 12in monochrome monitor.

I was now not alone! I took out a subscription to APRICOT FILE ... and, given the above, the editorial did not make pleasant reading. Within days of collecting the F2, the link between Apricot and Tandy was broken; and APRICOT FILE told me there was to be a new corporate policy within Apricot regarding its future products. The crash in price of the F2 was even more dramatic than had been that for the Portable, but at least it worked properly.

I did not wait for the demise of AT Computerworld — the problems of communication (even by telephone) and travel over 100 miles at least once a week had become too great. So I chose a local independent Apricot distributor and took up the option of the second Xen.

I also ordered the external 5.25in disk drive as I still hoped I might find some way of importing data from my old system. The drive duly arrived but unfortunately version 1.00.07 of Windows did not support it — I could read from the drive but could not write to or format it. Paradoxically I was able to transfer files to the Apricot from the TRS-80, and even from the Tandy 2000, using a protocol converting program on the Model I.

After a further eight weeks, five new disks arrived (with a bill for £25) containing Windows version 1.2. There were no instructions but Disk 1 contained a batch file which promptly reformatted my hard disk for me! I then proceeded to dump the remaining disks only to find that the main Windows initiation file had a fault in it and would not load. For once I was only too thankful that I had (a) another Xen at home and (b) a full set of backup disks. I sent back 'Xen-in-a-box' (for so the disks were labelled) for a new copy.

Worries

Further disquieting news broke at the same time. We now learned that the new corporate policy was to pursue full IBM-compatibility. There were rumours that things could be done to the existing Xen, but I could not find any substantiation of these. Further when the Xen-i was announced, my laboratory suppliers said that they could not guarantee to make their boards compatible with the Xen. Maybe I would like to buy their complete package which included an IBM PC?

My software packages were also compromises. WordPerfect was the Xi version ported over and the story of the function key template is now well known (APRICOT FILE Release 1.11). Lotus told me that it had no intention of moving Symphony across for what would prove to be a very small customer base. And I still had no Windows 1.2 ...

In a final fit of desperation I wrote to the top. Back came a reply from Birmingham within the week, thanking me for buying Apricot and promising to look into my requirements for me. A member of the head office sales force would be despatched northwards. The first chap got promoted on his way to the station and moved to the Australian office; the second did arrive in Newcastle (on a Thursday) and was promptly promoted to the Southern region the following Monday (such must be the heady career prospects within the company).

Still, the outcome of this negotiation was that my two machines could be upgraded if I so wished, for a modest consideration. I did so wish: but one further minor problem became evident. The supplier had been removed from the list of approved distributors: and it would require the transactions to be carried out through a local firm. More machinations behind the scenes took place and eventually first one and then the other Xen was packed up and returned to Birmingham to Apricot Support and returned upgraded to Xen-i's.

Happy New Year ...

I still don't know whether this is a formal upgrade path. If the registration numbers are anything to go by the machines have had new motherboards put into the existing cabinets with Xen-i front and rear panels mounted. Of course it has the 5.25in internal

drive now ... convenient considering my archive data files are still on the smaller disks. There is an external 3.5in drive on order although I am not sure how long I shall have to wait for it.

And the 'modest consideration'? £1,199 for each machine, and the monitor needed to be upgraded to a paper-white model too. I was quite lucky to be a member of the User Scheme for a new version of Professional Delta was launched at the same time. I was allowed to upgrade to the IBM version for £75 — the program coming direct from Compsoft.

SSI also produced a new version of WordPerfect (version 4.2) but this cost me almost the full price (£345). Given that this package came from Apricot, what was even more ironic was that the keyboard template was for the IBM PC and the function-key codes are in two vertical rows. Now, if you would like to cut this up and stick it down above the Xen's horizontally-ranged function keys ...

Where have I got to now? Well, all the software that I have tried has worked admirably. Unfortunately I was not told that both the serial and parallel ports were of different configuration and that took an afternoon to rectify the cables. Apricot sent back the machines with the old Xen manuals and I am still waiting for the Xen-i documentation. My equipment suppliers tell me that there should be no interfacing problems and Polaroid Palette is said to work directly.

Each time I have been involved with a system that has been hailed by its afiçionados as being one of the best on the market at the time. I must admit that I have liked the feel of each machine and cannot help thinking that it is not the hardware that should be castigated.

Maybe I am too demanding in what I expect a system to do; but I am always mindful of an early remark by a hacker friend who firmly maintained that if machine A was able to do a particular function then in some way, someone somewhere would be able to make machine B do the same. Perhaps I should have bought the BBC Model B when I had the chance: maybe it should have been the IBM PC eighteen months ago. Either way I don't suppose it would have cost me as much and I wouldn't be writing this article now. Still, at least I am now back in the mainstream.

Oh yes! Just before the second Xen went back to Birmingham, the five redumped Windows disks turned up again. I tried them out only to find that the same fault occurred in the WIN.INI file. I sent them back to Apricot with the machine and my compliments. ◆

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Review

SideKick for Apricot?

MicroExpansions' WorkMate reviewed

By Roger Gann

In this day and age, no self-respecting 'power-user' of IBM PC's would be seen dead without at least a couple of memory-resident 'desktop accessory' programs running behind the normal applications. Until recently, the humble Apricot user was spared the opportunity of such vanity because these useful 'productivity tools' for the Apricot were conspicuous by their absence.

So it came as something of a shock to see an ad that announced not only a new program for the Apricot but one which was not a million miles in specification from the world's best-seller among memory-resident programs — Borland's SideKick.

Memory Residents' Association

In case you haven't a clue what a memory resident program is, a brief diversion is in order. Such an animal is actually described more correctly as a 'terminate and stay resident' program; that is, it will load into memory and then terminate but remain in memory.

All Apricots already come with such a program; it's called MS-DOS. It loads into memory upon booting-up and remains completely invisible. All well-behaved applications will make extensive (albeit undetectable) use of MS-DOS, almost continuously calling it into action to perform specific functions and then letting it terminate until the next call. Another example is COMMAND.COM which provides all the internal commands like COPY and DIR. The celebrated (and oft imitated) DEALS FOR READERS screen accelerator FAST.COM is yet another.

The beauty of a memory resident application program is that it lies dormant, lurking in your RAM, until you summon it out of the ether with a combination of keystrokes. Say you're preparing next years cashflow statement using Lotus 1-2-3; the phone rings. It's someone with a message for you, but you can't find your Freehand Drawing Device (or 'pencil' as oldsters might term it). Worse still, you can't find any paper to write on. And it's gonna take an eternity to get out of this mega-huge accounts spreadsheet and boot up the word processor ...

But you have a memory-resident accessory program running, so there's no problem. Rather than disappoint your caller, you press the magic key combination and a 'to-do' list pops up in the middle of that really important spreadsheet. You key in the message, make the 'to-do' list disappear with another keystroke or two and resume working on your spreadsheet as if nothing had happened. At a suitably tranquil moment, you call up the aforesaid list again and wade through it, converting the to-do's into dones.

These memory-resident programs don't just include notepads, of course. Typically you get a whole range of handy pop-up extras; they might include an on-screen calculator, a calendar-cum-diary, decimal-hexadecimal conversion, autodialling comms, and more — all of which are available while you're working on something else. Effectively you suspend the current job for a time while one of the memory-resident utilities does its stuff; and when you've finished with the 'accessories', the main job is automatically resumed.

And now for the Apricot ...

Sounds like a good idea, no? IBM PC users have been able to do this for many a long year now. Even at TP Group we make incessant use of a very good memory resident program, name of Homebase, on one of our IBM-compatibles. And now it's the Apricot's turn.

The program in question is WorkMate from MicroExpansions Limited of Reading. This is perhaps the first memory resident program for the Apricot, though Ansible Information (near neighbours of MicroExpansions, as it happens, though there's no connection) might contend that the excellent ACOLYTE was first by a neck.

As with SideKick, the facilities in WorkMate include an appointments diary/calender plus an audible alarm and a look-up table for ASCII codes. It also features an address book (which can't be used for mail-merge work on the fly, though the entire file can be dumped in ASCII format for subsequent massaging and use in a mailshot). This can be used to dial someone automatically, assuming you have a modem connected.

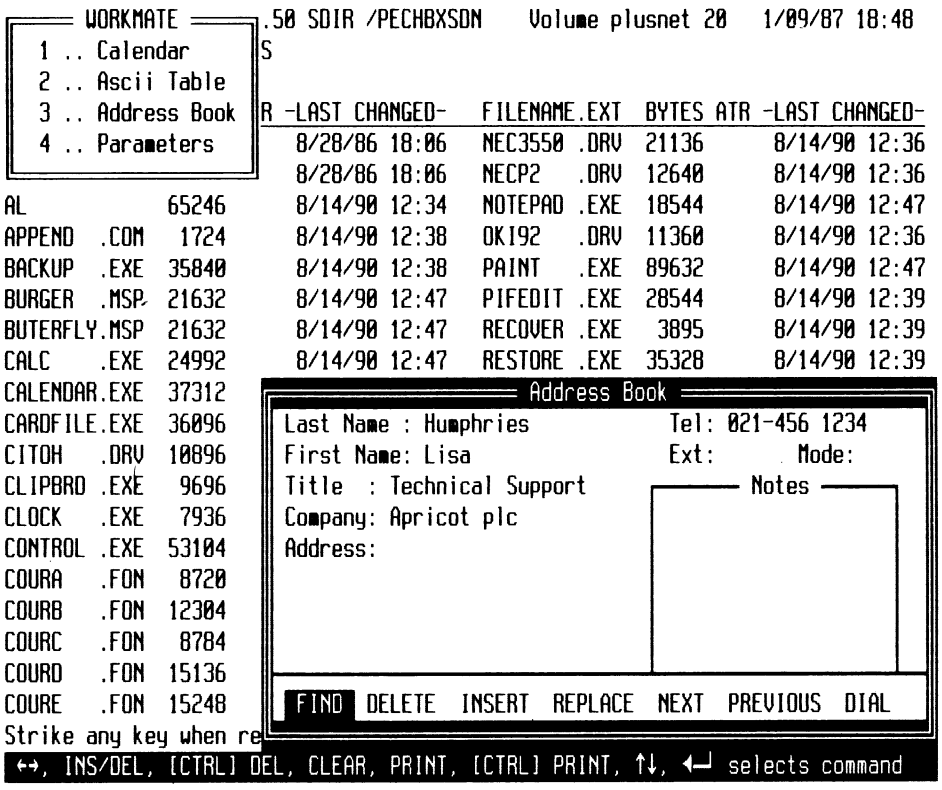
It does not offer a 'scratchpad' or a 'cut and paste' clipboard facility, both of which are handy for transferring text between different applications. Nor is there SideKick's quite sophisticated 'desk calculator', though that's probably superfluous on Apricots which have a built-in calculator anyway.

WorkMate will run on any Apricot with MS-DOS 3.1 and BIOS 3.1 — so, provided you can get hold of those prerequisites, it can be used with Xen, PC/Xi and F Series machines. WorkMate itself takes up some 54KB of RAM so you may find 256KB a little on the light side if you run a system laden with device drivers or graphics based front-ends; this will certainly be the case if you are using the Apricot Infernal, sorry, Internal Modem.

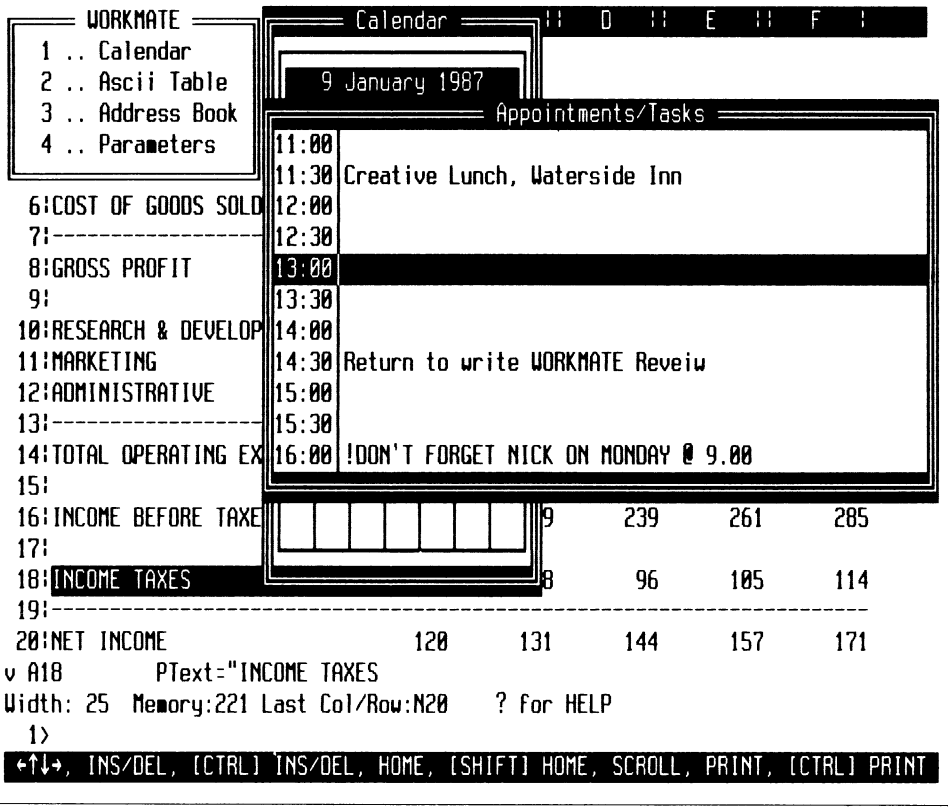
Why limit it to DOS 3 Apricots? Well, unlike SideKick, WorkMate runs under MS-NET — permitting say a secretary and boss to consult/amend an appointments diary from separate terminals on a Point 32 system. This is a nice touch, but it's of interest only to a minority of users. Lacking a network of any sorts I was unable to examine this feature.

Installation

Bucking the current trend amongst the major software producers, WorkMate is copy-protected. So if it's installed on your hard disk you have to go through the rigmarole of uninstalling it before you backup unless you don't mind losing your program and your money. You do get two copies of WorkMate on the distribution disk — "just in case". (By contrast, SideKick is available in both protected and unprotected flavours, the unprotected



Here WorkMate has appeared on a screen last used for an SDIR listing. The Address Book overlays that display; note the limited space for 'Notes'.



This time an Appointments diary for today's date has popped up over a SuperCalc spreadsheet. The current time-slot is highlighted.

version being dearer; some other IBM PC memory-resident utilities aren't protected at all.)

I installed our copy, version 1.5.2, on a 10MB Apricot Xi running under MS-DOS 3.2 and BIOS 3.1.2. It wouldn't install on our external hard disk, designated drive D — it seems that WorkMate insists on being on drive A. Otherwise, installation was a short and straightforward procedure. You do have to know in advance roughly how many addresses you will want to store — a maximum of 5,000, occupying some 200KB of disk space, is permitted.

You then have to configure it for use. To do this you simply type 'WORKMATE'; the program loads and a simple banner is displayed proclaiming its version and serial numbers with instructions on how to invoke it. On F series machines that's done by pressing CONTROL and VOICE together, on other Apricots you press both Shift keys at once. To put WorkMate back to sleep you use the grey FINISH key.

Having pressed the appropriate keys a tiny menu window appears in the top left corner of your screen. This gives you four options: Calender, ASCII table, Address Book and Parameters. Select the latter and a larger menu window appears the centre of the screen. It is here that you notice that the active window has a bright border — a useful touch if the screen is cluttered with text.

You can specify where on the screen the windows will appear, where the calender and address data files can be found if you're using a hard disk (the path), what sort of modem you are using and whether it is a multi-user system. Having completed this chore and saved the changes to disk you can just about forget about the parameters option.

The Calender

If have not used the address book or calender before, WorkMate spots this and creates the necessary text files before you go any further. You can then select the Calender option. Providing the system date and time is set correctly you'll see a window displaying the current month in tabular calendar style (no Pirelli ladies) with the cursor over today's box.

Hit Return, and the month window is replaced by an appointments list for today. A total of 490 days' appointments can be accommodated. The day runs around the 24-hour clock in 30 minute intervals with one line per interval; again, the current time slot (according to the system clock) is highlighted. You can then scroll through the day entering up your busy itinerary.

If you prefix your entry with an exclamation mark, you're designating an alarm flag. At the indicated time on the specified day the Apricot will start to beep repeatedly at you, whatever you happen to be doing at the time, and the 25th line will display the appointment details. Being particularly well disorganised I found this feature genuinely useful.

A combination of CONTROL and cursor keys lets you select other days, months and years. If you want a paper copy of all this, you simply press the grey PRINT key.

Another useful feature is the 'priority task list', what you and I might call a 'to-do' list. While at the daily appointment screen, hitting the SCROLL key will produce a pop-up to-do list. Again you can insert and delete complete lines and characters, thus making it easy to give a new task top priority. It's a childishly simple idea but of real value, and I now use this facility all the time. It does have one limitation though — you can list a maximum of only 40 tasks.

After protracted use with many insertions and deletions, the calender data file can resemble a Gruyère cheese. MicroExpansions provide an external utility to tidy up the file.

The ASCII Table

Option 2 of the main menu brings you the ASCII table. For all 255 ASCII codes, this lists the decimal value, hexadecimal value and screen character produced — a sequence like 63 3F ? , for instance — permitting easy conversion between the different notations.

This is perhaps the weakest feature of WorkMate as it is of such limited use except, perhaps, to programmers. But then most serious programmers could probably recite the whole table backwards in their sleep. Maybe armchair programmers such as myself might find it a boon. Well, SideKick has it too.

The Address Book

The third option gives you the address book function. This permits you to store the following details about a contact: Surname, Christian name, Title, Company, address, phone number and extension plus five short lines of free text in notes (only 20 characters per line). These notes represent the full extent of WorkMate's notepad facility.

The phone number, however, is usable not just as an *aide-memoire*. Providing you've got a modem fitted (including the Apricot internal modem, says the handbook) you can use WorkMate automatically to dial the number selected. In a large building you can even autodial another extension on the internal phone system. When the connection is made you must of course pick up the handset of the phone that shares the modem's phone line.

But WorkMate is not a terminal emulation program, and unlike most of the IBM PC memory-resident accessories there is no facility for *data* communications. So you can't summon up Telecom Gold or your favourite bulletin board; the autodial facility is solely for *vox humana.*

A small but irritating problem arises within the selection of the options displayed across the bottom of the window: FIND, DELETE, INSERT, REPLACE, NEXT, PREVIOUS and DIAL. You have to point at the required function then hit Return or the command's initial letter to execute it. Using the cursor can mean going around the houses to get where you want to end up; perhaps a WordStar-style option of using CONTROL keys should have been included — ^F, ^D, ^I and so on. Or the MicroScreen might have been employed.

I found the INSERT option poorly described — 'ADD' would be more appropriate. FIND will select a record that matches the indexed field typed in, DELETE will erase a selected record, REPLACE updates a record or series of records, NEXT and

PREVIOUS move to the adjacent record, DIAL dials out for you.

Only the Surname and Christian name fields are indexed so you must input a name of sorts if you want to locate the address record of a company. You could not search for 'MicroExpansions Limited'; you must have a *name* to search on. Some might find this a little constricting.

There are other awkwardnesses in the Address Book option. I found the space available for the Address field insufficient — only 20 characters per line, and you don't get word-wrap. Given the choice I would have dispensed with the rather mean area allocated to notes in the bottom right-hand corner of the window in exchange for longer address fields.

And you can only move around from field to field by use of the cursor keys. This becomes a nuisance if you are inputting a heap of names — having completed a field I would normally expect to move the next field merely by hitting Return. It is however possible to import (and export) text to or from previously-created address files, for instance those produced by MailMerge, and so save yourself a bit of keying-in.

As with the Calender facility, you can print out one or all records; and you can 'spring-clean' the address data file using another external program.

On-screen Help

The grey function key labelled HELP actually provides you with a context-sensitive help window which is scrollable. Repeated depressions of this key take you deeper and deeper in to the Help file. I found this to be a useful feature in practice — it should be if it takes up 85KB! If you don't require such gushing assistance pressing the UNDO function key gives you what is termed 'mini-help' confined to the 25th line.

Peaceful Co-existence

All memory-resident programs are prone to being upset by ill-behaved software — meaning applications programs that do not use MS-DOS function calls to perform a task, and in particular those relating to handling the keyboard and screen. If such a program talks directly to those devices it can cause severe problems for the memory-resident program as it surfaces in the middle of the application; and WorkMate is no exception.

Most common programs for the Apricot are 'well-behaved' and users should not experience any problems using WorkMate in conjunction with them. I could detect no conflict with ACOLYTE, and WorkMate ran 'under' a number of ordinary programs without fault — SuperCalc 3 and our accounts software CashLink to name but two.

It didn't like surfacing through screenfulls of graphics, though; it usually filled the screen with garbage. In GW-BASIC this was usually fatal, causing the machine to hang; but SuperCalc did let you return to the spreadsheet. Moral: activate WorkMate only when the screen is in text mode.

I did experience a modicum of bother with Spellbinder 5.4, Cardbox Plus and Word 2.0. With these, a window-sized hole would often be left in your text when you exited from WorkMate; refreshing the screen or using CONTROL-CLEAR filled the hole. I also noticed the cursor acting oddly from time to time, as though it were passing through a bottleneck.

The Manual

WorkMate's manual is a 51-page A5 affair produced on a laser printer — we desktop publishing pioneers can spot these things a mile off! It is clearly written but a bit disorganised. It is split in to two halves, Installation and Reference, but there's no section actually on how to use WorkMate.

The manual has no index, and I felt it repeated itself too much. A READ.ME text file on the disk largely duplicates the Installation section of the manual, too. The text file did however contain some important details not present in the manual — yet the manual didn't mention the existence of the READ.ME file.

In conclusion

WorkMate is slightly flawed program, and by IBM PC standards the omission of autodialling comms is surprising. But I am prepared to overlook this. I guess any busy office person whose phone rings constantly and whose train of thought never gets the chance to leave the station would find WorkMate handy.

Verdict? Not quite indispensible, but at that price you can't lose. The best comment I can make is that I now use it all the time — and it's become one of those programs where you wonder how you ever managed without it. ◆

WorkMate

Description:	Memory-resident tool — includes Calendar with Appointments Diary, alarm clock, and 'to-do' list: Address Book with automatic dialling via modem for voice communications: ASCII code summary
Supplier:	MicroExpansions Limited
Address:	223b London Road Reading Berkshire RG1 3NY
Telephone:	0734 661393
Price:	£49.95 plus VAT and £2 p&p (single-user)
Configuration:	any Apricot with MS-DOS 3.1 and BIOS 3.1
Conclusion:	A genuinely useful general-purpose addition to any Apricot for the user who wishes to get more out of the computer. Not quite as good as its IBM PC equivalents, and not as fully-specified. Some shortcomings in operation, but some bonuses too. Besides, it's the only one of its kind for the Apricot. In short — recommended.

Review

A word for the Apricot

Four possibly relevant titles reviewed

By Paul Lavin

There is evidently no more Herculean task than to write a book about computers. I have gleaned this rule from my not inconsiderable experience in reading computer books and the relative scarcity of the sweet I found among the sour. If writing a good computer manual were easy, there would certainly be more of them about.

The task is a daunting one if only on the basis that the author hasn't an inkling of who is going to pick up the book. A book written on computer applications, say word processing, needs to say widely different things to the gonzo 8086 assembler freak versus the poor sod who hasn't even figured out how to get a new computer out of its packaging.

Different authors approach the problem in varying ways. But whether they opt for an encyclopædic view or the focused dissection of minutiae, the problem remains for the reader to exercise his or her discretion at the time of purchase. The difficulty of mail-order book buying may be somewhat ameliorated by the following comments on Apricot-specific books.

Apricot unveiled

A couple of months ago, Heinemann brought out a series of three soft-cover books apparently designed to help the new or learning Apricot owner adjust to the features and foibles of the Fruit of Glenrothes. One has to wonder if editorial heads rolled at Heinemann following Apricot's almost immediate desertion of that very same audience ...

Peter Rodwell was the author of *Introducing the Apricot*, *Business Computing with the Apricot* and *Advanced User's Guide to the Apricot* (the last having been raked over the coals by the inestimable D. Langford in APRICOT FILE Release 1.12). He has performed reasonably well given the critical constraint with which I prefaced this review.

(Background — Peter Rodwell spent a good deal of time with Apricot in the run-up to the launch of the F Series, the intention then being the production of a kind of 'Soul of a New Machine' book about the conception, design, production and marketing of the 'Rascal' machines. That came to nothing, but he was obviously privvy to a good deal of insider information and unpublished material. Shame he wasn't warned about the move to IBM-compatibility — Ed.)

While the amount of duplicated material in the first two of these titles leads me to believe that Rodwell has endeavoured to sell one-and-a-fractions' worth of contents as two whole volumes, he does provide the guidance that the poor sod referred to above needs to get on a first name basis with the Apricot — or, in fact, whether to buy an Apricot at all.

In *Introducing* he explains for the uninitiated some basic problems such as the alphabet soup of RAM, BIOS, CPU and RS232. A review of the customary uses for an Apricot are listed (aside from Hitchhiker's Guide); so are some tips for avoiding the pitfalls attendant when actually parting with your cash for a box full of chips and circuit boards. For the prospective owner, there is a recounting of the late, great line of Apricot-compatible Apricots as well as the Xen. If you are addicted to ACTIVITY (also see below advice for the GEM-afflicted) there's a helpful intro to Apricot's whimp of a WIMP front end. There is also a glance at comms, interconnectability and expansion devices.

Introducing the Apricot is ill suited for anyone but the complete novice. Still, I wish I'd had this book three years ago before embarking on my own Great Apricot Adventure.

Of slightly less use is the *Business Computing* tome. Rather than providing a general introduction to computers, this attempts to adjust a business user's expectations of computing applications to something nearer reality than the salesperson's claims. Word processing, spreadsheets, databases and integrated packages are dealt with — though rather superficially.

Actually, a prospective user of business software would be better served by searching for current reviews of popular and recently-released software by subscribing to this august journal or one of the glossy monthlies on the shelves of WH Smiths. There is little Apricot-specific information here to justify the 'Approved by Apricot' appellation of this pricey little number.

After Langford's ecstatic recommendation of the *Advanced User's Guide to the Apricot* ("better than a poke in the eye with an Apricot plc manual) there is not much else to add — except that, in addition to the technical information (and misinformation), the book does contain a good, if brief, discussion of networking with the Apricot.

This book could be a powerful turn-off to users who do not need, or want, to know about memory maps and hexadecimal addresses. But it is easily the best book of the three unless you are starting from scratch, computer-wise.

(This book is now available from DEALS FOR READERS *— Ed.)*

All about GEM

The fourth book in the Heinemann New Tech series, *Getting It Done With GEM* by APRICOT FILE contributor Kathy Lang, is a classic example of good effort badly spent. I certainly applaud the object of front-end systems such as GEM, namely, getting fledgling users off the ground without resorting to the fearful MS-DOS.

But consider the time and energy spent reading this book, installing GEM and generally messing about in an attempt to get it to work; despite the user-unfriendliness of the world's most popular operating system, you'd get a better return per erg of brainpower just buckling down and wrestling with MS-DOS. To this end I heartily recommend *Running MS-DOS* by Van Wolverton (published by

Microsoft Press and distributed by Penguin). This is now in its second edition with coverage of MS-DOS Version 3.1 and 3.2. It suffers only from its IBM-orientation; but it does recognise that there are other implementations in the world. *(We concur — Ed.)*

I must confess that I have never been able to get GEM properly fired up on my Portable, despite repeated tries and even with Kathy Lang's assistance. Anyhow, I have a word processor far superior to GEM WRITE and no time to waste playing with GEM PAINT.

So, who needs *Getting It Done With GEM*? If you are luckier, more persistent or more afraid of MS-DOS than I am, you'd be well advised to latch on to this book ... despite its lack of Apricot-specific content and an apparent discrepancy between the version covered and the GEM I got with my FP.

Kathy Lang, incidentally, is also responsible for *Managing Your Business With The Apricot*, published earlier this year. This is much superior to Rodwell's book if you want to look at the common business applications for the Apricot.

Money matters

The other great drawback of computer books, aside from the poor to middling quality, is the exorbitant prices of the little darlings. The above samples retail at between 15 and 16 quid for less than 200 pages (some of which are redundant anyway). This is also a corollary to the lack of excellence in the field: if the books were better, the publishers would sell more and the price would be proportionately lower.

That said, there is a supplier of computer books that can do significantly lower prices (typically about 50 per cent off); Peter Baron deals mostly in secondhand scientific and technical tomes but does have many current titles on his list. Contact P J Baron Scientific Books on 0348 873161. ◆

Booklist

Introducing the Apricot by Peter Rodwell: published 1986 by Heinemann, 256 pages, price £14.95. ISBN 0-434-91746X.

Business Computing with the Apricot by Peter Rodwell: published 1986 by Heinemann, 256 pages, price £14.95. ISBN 0-434-917451.

Advanced User's Guide to the Apricot by Peter Rodwell: published 1986 by Heinemann, 256 pages, price £14.95. ISBN 0-434-917443.

Getting It Done With GEM by Kathy Lang: published 1986 by Heinemann, 300 pages, price £16.00. ISBN 0-434-910678.

Running MS-DOS by Van Wolverton: second edition published 1986 by Microsoft/Penguin, 423 pages, price £19.95. ISBN 0-914845-68-3.

Managing Your Business With The Apricot by Kathy Lang: published 1986 by Holt, Rinehart & Winston, 142 pages, price £8.95. ISBN 0-03-910662-4.

Contributors in this issue

Dennis Jarrett is Editor of the newsletter. His magazine credits include being founder-editor of 16 BIT COMPUTING, OLIVETTI USER, COMMODORE USER, OFFICE AUTOMATION REPORT, PRACTICAL COMPUTING and WHICH COMPUTER? Books include THE IBM PC BOOK (not very thick), THE SIRIUS/VICTOR 9000 BOOK (very much thicker), THE ELECTRONIC OFFICE — A MANAGEMENT GUIDE (fairly thick), three titles about Commodore home computers (one thick, one a bit thick, one pseudonymous), and THE GOOD COMPUTING GUIDE (*really* thick and very cheap too at £2.95 — or £3.00 inc P&P from DEALS FOR READERS).

Alan Craxford is an orthopædic surgeon in the North East. Weaned on a TRSty-80 expanded beyond anything Tandy would have recognised, he probably owns the only home-micro Xen in captivity ... Although he says he uses WordPerfect for manuscripts and Delta 4 for research purposes, these seem more at home dropping notes to the mum-in-law and keeping track of the family finances.

Henry Deckhand is a pseudonymous cynic whose role at the newsletter is to generate jaundiced opinions about the computer industry and the way it conducts itself in public.

Paul Lavin is an American who succumbed to the wiles of an English woman and the siren song of the long British raspberry season over three years ago. He is a legal consultant and has recently renewed his love affair with computeroid machines. Unable to get beyond the third attack wave in *Space Invaders*, he has become conversant with the world of business software and the excruciating application of the Data Protection Act to the unsuspecting small business computer user.

Bob Smith has worked his way from big computers that did little to big computers that did a lot to little computers which did little once but now do a lot. This took some 18 years to accomplish, usually with big firms in big towns, but he now tries to do a lot for a little with an Apricot and a minicomputer for a company in a small town in the West Country.

David St. John-Wallis is a sort of psychologist who runs an export marketing consultancy, sells bits and pieces for the Apricot, and writes *enormously* thick marketing books about the developing world which don't sell very well. He says the greatest achievements of his 44 years were getting a disk volume named after him and proposing to the Governor of Puerto Rico. We don't know if he was accepted.

Report from Bandage & Plaster

Carefree printing

Printer Control Workshop: Mannesmann Tally MT290 reviewed

By Bob Smith

It doesn't always take a disaster to start you down the track of producing something constructive and useful. One would like it to be the result of careful planning, but in this case it was out of sheer irritation.

Working on the Apricot Xi one day, I needed to change some printer settings. I reached for the printer manual and for the umpteenth time couldn't find it (on this occasion it had dropped behind the radiator). After ranting and raving until the manual was eventually discovered, it began to dawn that I continually wasted a lot of time looking for the same things over and over again. It was time to find a method that *avoided* the manual. But first let me tell you about the printer we use.

The MT290

I'm quite convinced we have one of the best printers ever produced — a Mannesmann Tally MT290. It has no special individual attributes ... just more of them than any other printer I've used.

For instance, it prints at 5, 6, 7.5, 8.6, 10, 12, 15, 17 and 20 characters per inch. That latter pitch is one reason we went for this machine: we needed a printer that could print up to 250 characters across the page for large spreadsheets we were developing. We ultimately intended to use SuperCalc 3.2 and its 'sideways' printing facility. As we all know by now, Sorcim's new bosses, Computer Associates, argued with Apricot and refused to implement new releases so that no-one ever got further than version 3 release 1. Thank goodness we'd got the MT290 and could manage without the 'sideways' printing after all. *(Sideways in SuperCalc was and is an external program anyway; various similar alternatives are available, including the S&S package available from* DEALS FOR READERS — Ed.)

Benchmarks

The manufacturer claims the MT290 prints at 200 characters per second in draft mode and 50 cps in NLQ (Near Letter Quality) mode. In practice, printers never perform as fast as the manufacturers claim; but we customers usually have no other guide to go on.

But in February 1984 *Byte* magazine published an article called 'The Art of Benchmarking Printers' which described new and comprehensive speed tests for dot-matrix and daisywheel printers. These tests are very easy to set up in Basic, even including a check on a printer's logic-seeking or optimisation capability. For anyone really interested in learning the awful truth about their own printer, I unreservedly recommend this article. But be warned, you may not like what you find out!

The test I ran on the MT290 was to time the printing of 50 lines each comprising the letter A repeated 80 times. Draft mode produced a speed of 166 cps; the NLQ mode came out at 33 cps. The former is acceptable, and is relatively better than all of the printers tested in the *Byte* article -- Epson MX-80 and RX-80, Okidata 82A and 92, and suchlike — apart from the Epson FX-80, which attained the equivalent speed on this particular test. The NLQ speed is a lot less than expected, though in this mode the MT290 still scores better than all but two of the *Byte*-tested printers.

WP features

The NLQ mode on the MT290 is not just the usual double-striking of the characters formed for draft printing. Instead it's a completely different font called 'quadrato' — cleaner and rounder, rather like the NONSERIF font for Apricot screens.

As the 'extras' list shows, other fonts can be used; but these are only available as plug-in ROM cartridges. They are active only in NLQ mode, but that can be either 10 or 12 cpi. We have the one called MODERN which is like the standard screen font on non-F series Apricots. Oddly enough, we prefer the MODERN for prints but NONSERIF for our screens.

As on most matrix printers the NLQ characters are formed by two passes of the print head. The printing is not a double-strike on the second pass of characters formed by the first, but rather a much heavier density of printing altogether. Data processing mode on the MT290 causes characters to be formed from a 9x9 matrix: in NLQ mode the matrix used is 18x40 — little wonder the speed is reduced by 80 per cent! On the first pass, the print head forms the outline of each character; on the second, it fills in the tiny spaces in between.

Compared to the so-called NLQ of cheaper Epsons and other printers, the result is staggeringly high quality — good enough for internal documents and most correspondence. In fact, it's good enough for anything except perhaps begging letters to the bank and other VIPs.

Other wp facilities include proportional spacing, centering and right-justification. The latter two should of course be possible from even moderately-featured word processing software, but proportional spacing (often known as micro-justification) is impossible if the printer is not 'known' to the software. Even then, the process can

be a real trial; if I want it, I'd rather have the printer do the working out than the software — the hardware is probably more efficient and quicker. Anyway, the MT290 is not 'known' to any word processor we use so we have no option. Proportional spacing is only available in NLQ mode.

Paper feed

Continuous stationery can be fed into the MT290 from the back or bottom. Providing you don't mind a slot cut in the work surface your printer is on, the latter route is the best because it will prevent the paper going in from snagging against paper coming out. Because we encase our printer in an acoustic silencer, we have to use the rear feed ourselves, but still draw the paper up from the floor through a slot just behind the silencer.

We don't have the automatic front feed or sheet feeder as our MT290 is primarily used for data processing. Note that the front feeder is an extra that cannot be fitted afterwards; it *must* be ordered with the MT290. It would be used for demand printing of special forms such as hotel bills or tickets in point-of-sale situations.

MT290 extras

■ Automatic sheet feeder (dual tray)	£340
■ Font cartridges [Courier, Letter Gothic, Futura, Italic, Helen, Modern, OCR-A, OCR-B, Epson, Barcodes, Diablo 630]	£32 each
■ Printer stand with paper stacker	£90
■ RS232 interface	£120
■ Double tractor	£99
■ Ribbons (two million impressions)	£4 each

But the sheet feeder in particular looks a very useful option for document production. Having two trays, it's possible to have letterheads in one tray and continuation sheets in the other. You could then put print controls in a document (via the OUT command in SuperWriter, for instance) to select the first page from the tray with letterheads and subsequent pages from the other tray.

Single forms can be fed from above, that is, slotted into the printer in front of the tractors and just behind the roller (very like a typewriter) and between guides that can be adjusted to standard widths. These guides are excellent in helping to put the paper in straight with the see-through plastic paper retainer providing a final check.

Configuration

The MT290 can be programmed either from the attached computer through escape sequences or directly through a front panel. The latter method has the advantage of causing the settings to be held in non-volatile memory for up to 60 days when the power is switched off.

There are three lights on the front panel to indicate the usual conditions — power on, online and paper empty. There is also an online/offline toggle switch and another three for LF (line feed), FF (form feed) and TEST (prints a single line of symbols, letters and digits).

There are two more buttons, one marked YES, the other NO. If the YES button is pressed for less than one second when the printer is offline, it will put the MT290 into NLQ mode. Similarly the NO button changes the mode to draft. A short beep tells you that you have performed the toggle correctly.

If you hold down the YES button for more than a second, you enter 'programming mode' whereupon you are led through a series of yes/no questions that let you change any or all of the programmable functions. Actually, there are one or two functions — such as switching between Epson and IBM compatibility — that can only be obtained this way. The manual calls this the 'menu' and it has some 60 possible questions; they are ordered logically so that YES to 'Change horizontal spacing' takes you through the eight possible characters-per-inch settings (till you say YES to one) and NO skips to the next group. Each question is printed by the MT290 in turn with your answer after you have hit the appropriate button.

Without going into too much detail, the common functions tend to be grouped near the start (first is the MT STANDARD/IBM/EPSON choice) and the more esoteric appear at the end of the menu: you use the YES/NO buttons to answer: and the TEST button to abort.

The NO button, if held down for more than one second, prints out the current menu settings.

Compatibility and graphics

This compatibility appears to mean that the printer can understand and interpret the escape sequences sent to it by a computer that thinks it is attached to either an IBM PC printer or an Epson MX-100. I've tested all the usual print functions that I can for the latter, and they do work OK. You have first to configure the printer to Epson compatibility using the front panel.

But one thing I cannot get to work is the printing of graphs from SuperCalc 3. You can't set the graphics device to be an MT290 because it is not in SuperCalc's available printers list: so you set it to either IBM or Epson MX-100 (and likewise the printer itself). But when the PLOT command is entered, SuperCalc grandly says 'plotting' and then hangs until the Apricot is reset. There is possibly some minor detail not set right; if we were to use graphs seriously, I'd probably ring Computer Associates and pretend I was thinking of ditching Lotus 1-2-3 in favour of SuperCalc but couldn't

because of this little nagging problem to do with graph printing from a printer not on SuperCalc's list ...

By the way, the Epson font listed under the 'Options' is to give the MT290 FX-100+ compatibility. Perhaps this font would also provide the graph printing?

Apart from these inglorious attempts to plot from SuperCalc 3, I have to confess that I have not tried direct use of the graphics functions. The pictures in the manual are impressive, however; and, in native mode, the MT290 is probably as good at graphics as any other printer in the same price bracket.

Printer tests

There are three types of test available, selectable only from the front panel.

'Rolling ASCII V' is the usual test which prints out a full 132-character line of the printable characters. It keeps going if you keep your finger on the TEST button, but prints a characters less on either side of each line until the 66th line when they all appear again — hence the 'rolling V' shape. To run the test without holding down TEST continuously, you press this button during power-up and it carries on itself once started.

The 'Generator Test' simply prints all the nine possible national character sets. If you take these as an indication of where the British pound sign is welcome, you find it's all right for the UK (naturally), France, Italy, and Spain — they don't seem to like it in USA, Germany, Sweden, Norway or Portugal. Make sense of that thinking if you can! By the way, what do the Spanish use an inverted question mark for? *(It precedes a question which is terminated by the usual English-type query mark — Ed.)*

The 'Interface Code Test' is the most interesting from the programmer's viewpoint. This has two variations that both allow printing of all data — including control codes — from the host computer. When you press TEST, the question 'Control codes only?' is printed. Pressing the NO button causes all data to be printed as hex with control codes underlined. The YES answer causes all non-printable characters to be treated as control codes (printed in hex and underlined) and all others printed as ASCII.

You then start the 'test' by the ONLINE button. You abort by setting the printer offline (pressing ONLINE again), then TEST. The printer gives you little printed messages along the way including an 'End of test' advice.

When you start this test, for no obvious reason and completely undocumented, the MT290 emits a few cheerful musical notes. Its signature tune? Or a sign of jolliness from the unknown programmer that coded the test?

And before anyone asks, yes I did try this out to see what SuperCalc's PLOT command was sending to the MT290. Answer — nothing, not even nulls. Which means the problem is to do with SuperCalc after all.

Documentation

Well, the MT290 manual is a translation from German; so it's slightly better than one from Japanese, if you can put up with a few misspellings like 'incomming data'.

Actually, the English is OK and the grammar acceptable. It's the organisation with which I find fault. More than that, the documentation omits some vital introductory information that would be of considerable help in realising the potential of the printer itself.

For instance, the descriptions of print control codes are tolerable and most come with a few programming examples (in Basic). But they are confused by references to six possible modes. My printer allows *three* modes — MT standard, IBM or Epson. The others referred to in the manual are MT140, PC1 and PC2. There is no explanation of what these are for, even if they could be selected *(don't know about the PCs, but the MT140 was/is a matrix printer that could do Sirius/Victor 9000 graphics directly — Ed)*. I suspect that the PROM firmware in my printer is out of line with the manual.

I used to give my WordStar-Like Clarity Award to the early Epson printer documentation. Having checked up recently on the MX-100 and RX-80 manuals, I wonder if it's time to honour a new recipient?

MT290	
Description:	Dot matrix printer — 200 cps in draft mode, 50 cps in NLQ mode (but see text)
Supplier:	Mannesmann Tally via dealers
Address:	Molly Millars Lane Wokingham Berkshire RG11 2QT
Telephone:	0734 788711
Price:	£795 (with automatic front feed £1,095)
Conclusion:	Reliable, speedy, excellent NLQ — a machine for all-day use (or for the well-off system developer). For not so heavy use, consider the MT86.

The Mannesmann Tally range

Though Mannesmann Tally is a German company, some of its printers are made in Japan (the cheaper ones) and some in the USA (the more expensive models). If you understand Renault's system for numbering cars — an R20 is bigger than an R5 — you'll be able to follow MT's.

As with most computer companies, MT products come and go like wildfire. But the basic architectures tend to continue — many 'new' printers, though usually improved, are often only a little different from previous ones. This is Mannesmann Tally's present range:

Name	Type	Speed	Price	Cols
MT80+	serial matrix	100 cps	£199+	80
MT85	serial matrix	180/45 cps	£365+	80
MT86	serial matrix	180/45 cps	£465+	132
MT90	inkjet	220/110 cps	£495+	80
MT290	serial matrix	200/50 cps	£795+	136
MT330	serial matrix	300/150/75	£1345+	136
MT460	serial matrix	200/50 cps	£1745+	132
MT490	serial matrix	400/150 cps	£1995+	132
MT660	line matrix	600 lpm	£6195	132
MT690	line matrix	900 lpm	£7995	132
MT910	laser	10 ppm	£3195	na
Pixy	pen plotter		£250	na

cps = characters per second
lpm = lines per minute
ppm = pages per minute

'Serial matrix' refers to the method of printing — one character at a time — rather than the interface to the computer

The two speeds shown for some printers indicate the manufacturer's ratings for first data processing mode and then NLQ mode

The MT80+ may be known to some Apricot owners as the Writer 22. At the start of 1986, this printer was being sold by Apricot both separately and as part of the F2 and F10 packages then on offer. It is a decent little printer, taking Epson control codes directly as its own standards but printing much better than any Epson around its price of £199.

The Inkjet, Laser and the MT330 are the latest in the range and serve to confound my previous statement of basic architectures just being repackaged. The Inkjet and Laser demonstrate brand-new technologies from the company and the MT330 represents the new 24-pin standard for quality matrix printers.

The MT330's 300/150/75 speeds are termed dp/correspondence/letter modes (in Mannesmann's brochures) and the matrix densities used are 24x12, 24x24, and 24x48. The 150 cps speed is equivalent to my MT290's NLQ at a third of that. This printer isn't cheap, but it certainly sets your mouth watering at the prospect of that sort of quality at that sort of speed.

Even so, the lasers are coming down in price rapidly and they are much faster still. Printers like the MT330 may find their market short-lived unless they also move down in price.

We have an earlier printer from the Mannesmann range called the MT440 which prints at 400/100 cps. I mention this fact just because it gives the opportunity to tell you about slew speeds. These refer to the rate of paper advance which on the 400 range is an incredible 15in per second — in other words, these printers can eject blank pages at the rate of 80 per minute! Not impressed? Neither was I when some clown sent duff control codes that got turned into form feeds — hundreds of them! The 400s achieve this slew rate without paper jamming by the use of double tractors, one before and one after the print head.

The MT660/690s are 'line' printers, meaning that they print a line at a time. They are a wee bit over-powered, not to say highly priced, for the average micro setup. Until recently, most printers for the minicomputer market had the advantage of speed but very little else; now, at last, the impact of printers like the MT660 which can do bar codes, plotting and correspondence mode as well is changing all that.

Features of the MT290

Print speed	200 cps data processing mode, 50 cps NLQ mode (but see benchmarks in text)
Character matrix	9x9 data processing mode, 18x40 NLQ mode
Character set	255 printable characters — includes IBM PC and nine national character sets
Line densities	5, 6, 7.5, 8.6, 10, 12, 15, 17, 20 characters per inch
Line spacing	3, 4, 6, 8, 12 lines per inch
Typeface	Quadrato (and font-cartridge options)
Compatibility	IBM PC and Epson MX100 printers (see text)
Graphic mode	Direct needle addressing (8 data bits) with 72/144 dots per inch vertical, 60-240 dots per inch horizontal
Programmability	All above functions (except configuring for compatibility — see text) plus proportional print, centering, right-justification, margins (left, right, bottom), subscript, superscript
Paper width	max 16in, min 3in (standard 132 chars at 10 cpi)
Paper transport	Tractors or friction (both standard) with continuous stationery feed from rear or bottom, single form feed (manual) from above
Interfaces	Centronics-type 8-bit parallel standard; RS232 and 20mA current loop optional extra
Dimensions	19x6x10in WxHxD
Weight	approx 25lb
Documentation	114-page applications (ie user's) manual, 50-page operating manual

Printer control

That's the printer: now for the means of controlling it. The rest of this article describes a method that uses one menu, several batch files, lots of tiny control code files and a small Basic program. Use is made of standard MS-DOS facilities such as redirection, appending text to disk files and copying of text and files to devices. This approach can of course be applied to any printer that will take control codes from the computer.

First, a confession. Though it makes a nice example of how MS-DOS can be turned to one's advantage, this system could all have been done in a single program. The reason for not doing so is partly laziness and partly a genuine desire to explore MS-DOS and to wring out of it all that one can.

It emerges that MS-DOS contains all the elements of a simple programming language. When these are combined in the right way, simple useful utilities can be easily and quickly created: even better, they can be tested quickly. Put them into batch files with their names and functions listed on a menu and you have a system.

What follows is such a system. Hopefully, it will serve as a taster of what MS-DOS can do for you.

As with most printers, the functions of the MT290 can be selected by the computer to which it is attached by the transmission of control codes. In standard MT mode, the MT290 codes always start with the ANSI lead-in sequence of 1B5B hex or ESC [(the escape code, decimal 27, followed by decimal 91 for a left square bracket). My problem was remembering what followed next.

So we produced a menu of print functions. The upper half of the menu shows the functions available for output to the printer. These are a bit cramped on the lefthand side (in order to squeeze them all in) but more obvious on the right.

The functions are identified on disk by names ending in .HEX and prefixed by those shown on the menu — P12.HEX, for example. They are output to the printer by the command PF; new functions can be created with the command HEX.

As well as the PF parameter names, the actual codes output are also shown; ESC[5w as the code for selecting 12 cpi, for instance. I consider it useful and educational to see them as well. All the codes are luckily 'viewable' and 'enterable' as normal ASCII characters, making it easy for the OUT command described below.

The Print Function Menu

Function	Hex code	Parm	Function	Hex code	Parm	
C.P.I.	ESC[xw	Px	Draft mode	ESC[0y	DR	
5	x=0	x=5	NLQ mode	ESC[1y	NL	(only 10/12cpi)
6	x=1	x=6				
8.5	x=2	x=8	Standard font	ESC[0m	ST	
10	x=4	x=10	Modern font	ESC[12m	MD	(NLQ only)
12	x=5	x=12				
17	x=6	x=17	Prop. sp. on	ESC[2y	PSON	(NLQ only)
20	x=7	x=20	Prop. sp. off	ESC[7y	PSOFF	
Emphasise on	ESC[=z	EMON	Emphasise off	ESC[>z	EMOFF	
Left Margin	ESC[nns	LMnn	Bottom Margin	ESC[;nnr	BMnn	
0, 6, 12, 18	= nn	= nn	0, 6, 60	= nn	= nn	
6 l.p.i.	ESC[3z	LS6	8 l.p.i.	ESC[4z	LS8	
Reset printer	ESC[6	I	Default:	DF	(LM6+P12+DR+ST)	
			Letter:	L	(LM6+P12+NL+MD)	

Set print function..PF p1 p2 etc
Form feed printer...FF
Test printer (page).T (P)

Create new function.....HEX
Output non-menu function...OUT p1 (T)
Output variable margins....OUT LM/RM/BM nn

CONTROL LOG

Display..LOG Clear.....LOG C Display instructions.....H
Print....LOG P Add time..LOG T Print instructions.....H P

SYSTEM MAIN MENU.....MM

The two codes at the bottom right, DF (default settings) and L (letter), can be used for combinations. They can be as long as you like for sets of particular controls that are always used together.

Note the provision of a log file used to keep a history of what functions are sent to the printer. This feature is especially useful when testing new functions and we used it to keep track of what was happening when trying to combine print controls.

For instance we found that setting the printer to a left margin of 40 would place the margin at 4in from the left if the cpi setting was 10, but only 2in if it were 20. Also, for a long time, we didn't realise that the MODERN font selection only became active if we had selected both NLQ and 10/12 cpi. The log file sorted out a lot of misconceptions like these.

The commands

The lower half of the menu shows the commands available and correspond to batch files. PFM.BAT, PF.BAT, OUT.BAT, LOG.BAT, HEX.BAT and T.BAT are listed in full at the end of this section. The whole system is kept in a subdirectory of its own on my hard disk (called PRFUN).

PFM [not on menu] clears the screen with ESC E and displays the print function menu. If you are using a hard-disk Apricot, this .BAT file should also be in your root directory.

PF sets print function — used with one or more of the aforementioned HEX files, eg PF EMON to set the printer to 'Emphasised On'. You can use any number of print-function parameters. To test the printer settings so transmitted, put T as the last of your parameters (any parameters placed after the T will be ignored) and the test print will be output (by T.BAT). Each function sent is logged to the PFLOG file (see the LOG command below).

HEX creates a new HEX-suffix file — invokes the MSBASIC program HEX.BAS which requests the name of the HEX file you wish to create, and then the hexadecimal characters that make up the desired function. (This is an adaption of a small program written by Alec Wardrop and first listed in APRICOT FILE Release 1.3 — it's on DEALS FOR READERS disk AP003 as HEXFILE.BAS. Many thanks to him for it.)

FF sends the form-feed character (hex 0C) to the printer, to push the paper forward one page. Logs this action to PFLOG.

T sends a test pattern to the printer and logs this action to PFLOG.

T P prints 90 lines to test page length setting and logs this action to PFLOG.

LOG displays the contents of PFLOG. This file contains an entry for each function sent by PF.BAT and OUT.BAT, and for each test sent by T.BAT. Here is a sample display:

```
Start of control log
============================
Current date is Tue  2/12/1986
Current time is 10:30:02.12
============================
MT - P12
MT - NL
MT - MD
MT - Test
MT - LS8
MT - Out - BM 88
MT - FF
MT - Test Page Length
MT - I
```

This sample shows that 12 cpi, NLQ, and MODERN font were selected and checked with a print test. Then line spacing was set to 8 lines per inch, OUT was used to set the bottom margin (page length) to 88 lines, a form-feed was sent and a test page printed. The final I command re-initialises the printer to its switch-on settings.

LOG P prints the contents of PFLOG on the printer.

LOG C clears PFLOG, but first pauses to let you abort if you want to. It first renames PFLOG to PFLOG.BAK (any existing PFLOG.BAK is erased), then puts the current date and time into the new PFLOG to show when it started. Displays new contents of PFLOG. Note the use of the double greater-than arrows >> to append text from the ECHO statements to PFLOG and CR.DAT to supply a carriage return (its sole

content) to the DATE and TIME commands.

LOG T puts the current time and date into PFLOG, then displays PFLOG.

OUT outputs escape sequence to the printer and logs the sequence to PFLOG. OUT actually sends ESC [followed by the characters you enter. Providing the desired control code can be expressed in characters that can be entered at the keyboard and is always preceded by ESC [, this command is an easy way to experiment with printer control codes. Only one parameter is allowed; but it can be followed by T to print a test pattern, for example OUT 12m T to set NLQ mode on and test it.

OUT LM sets left margin to setting entered (logged to PFLOG). Can be followed by T to print test pattern, for example OUT LM 15 T to set left margin to 15 and print test.

OUT RM sets right margin — analogous to OUT LM above.

OUT BM sets bottom margin — analogous to OUT LM above.

H displays these instructions, a screen at a time.

H P outputs instructions to the printer.

MM a dummy command to return you to your main menu. If using a hard disk, replace 'MM' with your own main-menu .BAT command.

Finally ...

One more batch file is listed — PFU.BAT. This performs the same function as PF.BAT, but is modified for use within other BAT files by the COMMAND/C method — for instance:

```
COMMAND/C PFU P20 LM18
```

PFU.BAT should be installed in your root directory and the path set to make sure it is always picked up. This way all your BAT files can use the \PRFUN printer function files.

The Batch Files

PFM.BAT

```
ECHO OFF
REM Displays PFM Menu
CD\PRFUN
ECHO [E
TYPE PFM.MNU
```

PF.BAT

```
ECHO OFF
REM Sends Hex control codes to printer
IF %1z==z GOTO HELP
:SEND
    IF %1z==z PFM
    IF %1==T T
    COPY %1.HEX PRN
    ECHO MT - %1 >> PFLOG
    SHIFT
    GOTO SEND
:HELP
    ECHO
    ECHO Syntax: PF p1 p2 p3 etc
    ECHO where the parameters p1, etc are
    ECHO printer function codes listed above
    ECHO eg. PF P12 LM6 (to set pitch 12 and
    ECHO left margin of 6)
    ECHO Note: to test function codes just sent,
    ECHO make the last parameter T
    ECHO eg PF P10 EMON T
    ECHO
    PAUSE
PFM
```

OUT.BAT

```
ECHO OFF
REM Output escape string to printer
    IF %1z==z GOTO HELP
    IF %1==LM ECHO  [%2s > PRN
    IF %1==RM ECHO  [;%2s > PRN
    IF %1==BM ECHO  [;%2r > PRN
    FOR %%A IN (LM RM BM) DO IF %1==%%A GOTO TEST
    ECHO  [%1 > PRN
    ECHO MT - Out - ESC[%1 >> PFLOG
:TEST
    IF %1==LM ECHO MT - Out - LM%2 >> PFLOG
    IF %1==RM ECHO MT - Out - RM%2 >> PFLOG
    IF %1==BM ECHO MT - Out - BM%2 >> PFLOG
    IF "%2"=="T" T
    IF "%3"=="T" T
    GOTO END
:HELP
    ECHO
    ECHO Syntax: OUT [string] to send
    ECHO escape sequence to printer.
    ECHO Note: ESC[ is sent for you,
    ECHO just supply the rest.
    ECHO
    ECHO or: OUT LM nn
    ECHO to set left margin to nn on printer.
    ECHO or: OUT RM nn
    ECHO to set right margin to nn on printer.
    ECHO or: OUT BM nn
    ECHO to set bottom margin to nn on printer.
    ECHO
    ECHO To test sequence just sent,
    ECHO add parameter T after others.
    ECHO
    PAUSE
:END
    PFM
```

LOG.BAT

```
ECHO OFF
REM Display, print, add date/time or clear PFLOG
:START
    ECHO
    IF %1z==z TYPE PFLOG
    IF %1z==z PAUSE
    IF %1z==z PFM
    IF %1==P COPY PFLOG PRN
    IF %1==P PFM
    IF %1==T GOTO TIME
    IF NOT %1==C GOTO HELP
    ECHO CLEAR CONTROL LOG
    ECHO - to cancel type CONTROL-C or
    PAUSE
    IF EXIST PFLOG.BAK DEL PFLOG.BAK
    RENAME PFLOG PFLOG.BAK
    ECHO Start of control log > PFLOG
:TIME
    ECHO ============================== >> PFLOG
    DATE < CR.DAT >> PFLOG
    TIME < CR.DAT >> PFLOG
    ECHO ============================== >> PFLOG
    SHIFT
    GOTO START
:HELP
    ECHO
    ECHO INVALID parameter for LOG command.
    ECHO Enter either no parameter at all
    ECHO or P, C or T.
    ECHO
    PAUSE
PFM
```

HEX.BAT

```
ECHO OFF
REM Create hex control code for printer
MSBASIC HEX
PFM
```

PFU.BAT

```
ECHO OFF
REM Send Hex control codes to printer
:START
    IF `%1"==""  GOTO END
    COPY \PRFUN\%1.HEX PRN
    ECHO MT - %1 >> \PRFUN\PFLOG
    SHIFT
    GOTO START
:END
```

The Easy Way

If readers would like a copy of this system, or an alternative I have created for the Epson RX-80 (which is also suitable for MX or FX printers), I'd be happy to oblige.

Please send a formatted diskette with a self-addressed and stamped (20p) disk mailer to the address below. If you don't have a mailer, just send 26p in stamps and your address — but please enclose your disk in some form of protective padding, at least wrapped in a piece of cardboard.

Don't forget to indicate whether you would like the MT290 example or the Epson version.

R.I.Smith
13 South View
Chaddiford Lane
Barnstaple
North Devon
EX31 1RD

T.BAT

```
ECHO OFF
REM Silly test pattern to test printer settings
IF `%1"=="P" GOTO PAGE
    ECHO          1         2         3         4         5 > PRN
    ECHO 123456789012345678901234567890123456789012345678901234567890 > PRN
    ECHO The quick brown fox went into the garden to sleep. > PRN
    ECHO THE QUICK BROWN FOX WENT INTO THE GARDEN TO SLEEP. > PRN
    ECHO MT - Test >> PFLOG
    PFM
:PAGE
    ECHO Line 1 > PRN
    ECHO Line 2 > PRN
    ECHO Line 3 > PRN

... and so on for succeeding lines ...

    ECHO Line 89 > PRN
    ECHO Line 90 > PRN
ECHO MT - Test Page Length >> PFLOG
    FF
```

Group Test

Spreadsheet Grand Prix

Six Spreadsheets Compared

By David St.John Wallis

About a year ago the Editor asked for punters to review programs *(and we're still interested in hearing from would-be reviewers — Ed)*. I got Logistix. It didn't work, mind you. Moons later, I got another version: this worked on Xens, but not Apricots. After numerous abusive phone calls from said Ed to me and from me to Logistix, a Beta-test Apricot-format copy of version 1.1 arrived. It crashed a lot and spectacularly too.

Meanwhile our fledgling computer company had started inconsequentially to flog software too and got hold of some other spreadsheet packages. Now I know how much discipline you need to be a professional writer: it took forever to get around to doing what I thought I wanted to do anyway — test a few spreadsheet programs for speed.

Sweat

Why test for speed? Despite Mike Nash's dire warnings in APRICOT FILE Release 2.3, we do *all* our accounts on spreadsheets. The biggest of these is called BILLS (311KB in Lotus 1-2-3 format); it tells us who to bill, what to bill them for and when, what we have to pay for what we sell, whether we made any money on the deal, and so on.

After a lot of sweat on our part, this model now needs only one recalculation to work — but boy, it's a big on. We've all been spoiled a bit by computers and take them for granted now; this spreadsheet does have a minimum of 15,000 calculations to do, but still I wanted it to be quicker than one whole minute.

So what's wrong with SuperCalc? Well, not a lot really — particularly if you just use it as a smart calculator. But it *is* slow and it *is* limited on worksheet size. It's also beginning to show its age — like it cannot do time arithmetic, sorting is sluggish, the data management is a bit clumsy, it has no RND function, you can only have one spreadsheet going at a time, it doesn't support the 8087, lots of its competitors have more financial and statistical capabilities.

If we wanted a bigger and faster spreadsheet package we had to see what we could get and then devise a worksheet to check them all fairly. At the same time we decided to put in a few testing floating point functions as well.

The test

We used SuperCalc as a benchmark, since that's the first and maybe the last spreadsheet a lot of Apricot owners will ever see. As with Multiplan, SuperCalc can handle only 254 rows give or take one) and that determined the size of the test model. We tested against SuperCalc 3.

If you want to try it on your own spreadsheet, proceed as follows:

cell	contents
A1	1
A2	A1+1
B1	SQRT(A1)
C1	COS(B1)
D1	B1*B1*C1*C1
E1	TAN(D1)
F1	LOG(B1/D1)

(These are SuperCalc-style cell names — A1 in Smart and Multiplan is called R1C1, which takes twice as long to type). Now replicate A2 down to A254, and replicate B1:F1 to B254.

Go go back to A1 and put 'G250' into it. Then finally go to G250 and put a number into it — '2' will do, or you could try '3' if you're feeling imaginative.

The results

The test itself has two questions to answer:

- How long does it take the computer to calculate the value of F254 once the value in G250 is changed
- What is the result of F254 if G250 is '1'?

The table compares six spreadsheets, and with beady analyticals at full throttle you may detect that SuperCalc comes last. That is because all the other programs were faster — and Smart was fully *35* times faster than SuperCalc 3.

Comparisons

	Time	Speed	Result	File size
Smart	5.2	35.23	-2.72	51,489KB
Symphony	34.95	5.24	-1.17935	46,696KB
Logistix	34.95	5.24	-1.16837	60,072KB
1-2-3	35.15	5.21	-1.17935	47,488KB
Open Access	121.3	1.51	-1.17936	95,232KB
SuperCalc 3	183.2	1.00	-1.17936	47,104KB

We left out Multiplan and Xchange's Abacus. Multiplan wouldn't work properly at times; and when it did, it was jolly slow. Multiplan's authors don't seem to have heard of replication. And getting out of its Help screens would have beaten Newton, Pascal and Lady Ada in concert. (If you want to get out of Multiplan Help screens, use R. Helpful, no?)

And Psion's Chess turned up instead of Abacus. Xchange (which includes Abacus) did finally arrive, complete with four grey plastic boxes with do-it-yourself manual insertion instructions and well-hidden disks. Abacus is supposed to call the 8087 and uses BIOS 3.1 ...

But at least it's not copy-protected, and Psion continues to support Apricot freaks. Its benchtest results were intriguing. Speed of 39.3 seconds was slower than Lotus 1-2-3 and the fifth fastest of those tested. The result of its deliberations was more or less identical to Smart's. But it had a nice small file size at 23,485 bytes.

Following deep discussions with Psion on the question of the non-speed of Abacus, we were told the spreadsheet will work a lot quicker on my benchtest if the order of calculation is changed to COL rather than ROW. Well, I knew that. What I didn't do — for any of the tests — was to muck about with the order of calculation: I deliberately used only the default, and Abacus's default is ROW.

Psion also said the program was jolly slow because it had to read bits off the disk in order to perform the calculations. A bit silly that, quoth I. Why not read the whole program into memory? After all, there isn't much of it. "Well, you've got to consider the chaps who don't have more than 256KB", Psion countered persuasively.

So a 600KB RAMdisk was created and all of Xchange was read into it. The test re-performed with not a lot of difference. Then the order of recalculation was changed to COL — and wow!. Speed improved to 19.75 seconds. That makes Abacus the fastest of spreadsheets still supported for the Apricot.

As for bad news, the F254 result on Abacus was still about the same as Smart's (but then who cares much if a result should be -1 something and comes out as -2 something). The good news is that one has now changed what passes for ones mind, because the Abacus bit of Xchange is available separately at about £175 (less from OmrC Computers).

In case you've forgotten, Psion Chess is jolly good *(see the review in* APRICOT FILE *Release 5 — Ed).*

How Smart?

Of the results listed, Smart clearly won on speed ... but at what a cost! 35 times faster but 52 per cent wronger. Imagine if that result was a telephone number or your bank balance.

Help! Also, Smart announced loftily that they wouldn't be supporting the likes of us anyway from now on. So we can eliminate Smart if we want a bigger faster spreadsheet than SuperCalc.

There isn't a lot to choose between the next three on these results. They are all copy-protected. But Lotus 1-2-3 is easy to break; you can even buy Lotus unprotectors nowadays, and quite right too. Logistix is protected, but you can install it on a hard disk and forget about the originals for now — and even lose your dongle too if you never format your hard disk. Symphony for the Apricot apparently will stay protected with a beastly donglised disk until the next ice age. So you have an el-cheapo IBM PC clone? No problem; *of course* you can have it unprotected.

What about extras? 1-2-3, Symphony and Logistix all do graphics. One of them — Logistix — says it supports the 8087. Funny, that; it doesn't show up in the results. All do date arithmetic — at least I think Logistix does, but you have to have the patience of Job to find out how to enter a date.

Symphony of course has a word processor, comms, and a *huge* manual; and it is *integrated.* But I've changed my mind since the last Doodles column. I won't have Symphony because of its dongle: I've seen better database managers and comms packages and graphics: and Lotus Corp doesn't take in washing on Mondays.

Last words

We passed on these results to the software suppliers themselves and invited them to comment. SPI said Open Access ran in 17 seconds on a Xen and about 100 seconds on a Zenith. (Rumour: Open Access is coming out soon in a new version.)

Grafox was pleased that we had finally got Logistix to work but couldn't comment on my specific point that the program should run a whole lot faster since it's supposed to call the co-processor.

Lotus has so far maintained a glum silence.

In conclusion — if you want speed, a decent size, quick easy graphics and modest cost, I think that 1-2-3 is the best of this lot. You don't have to pay for word processors you don't need: you can unprotect it: it's easy to learn. But I'm still looking for something which is as quick as Smart but more accurate ... ◆

Summary

Innovative Software: Smart	
Pros	Very fast, integrated
Cons	Inaccurate, Apricot no longer supported
Price	Around £395
Verdict	What a shame!
Score	1/10 (for effort)

Lotus: Symphony	
Pros	Quickish. A whole orchestra of facilities
Cons	Pricey. Very repetitive manual. Very well protected — you must use a dongle disk. Also, if you don't want a word processor, comms, and file management, that's just tough
Price	Around £450
Verdict	Probably the best integrated package if you like that kind of thing
Score	8/10 (for impressiveness)

Grafox: Logistix	
Pros	Claims a 'time management' capability as well as making use of the £120-plus 8087 maths co-processor chip. Can be used without a dongle disk
Cons	Graphics management very clumsy indeed. No apparent use of the 8087. No quicker than 1-2-3. Very complicated copy-protection algorithms. Requires BIOS 3.1, which is slower than 2.7
Price	Around £300.
Verdict	Back to the drawing board Grafox!
Score	3/10 (must try harder)

Lotus: 1-2-3 version 1a	
Pros	Standalone, sophisticated, very popular. Quickish. Cheap. Can be learned without a manual
Cons	Copy-protected. Apparently the 8087 support will not be available for Apricots
Price	Around £200
Verdict	Reputation justly earned
Score	8.5/10 (would have got a 9 if unprotected and a 10 if it supported the 8087)

SPI: Open Access	
Pros	Another integrated package. Poshly presented. SPI will continue to support Apricot with the new version of the spreadsheet module, which can be bought standalone
Cons	Unforgiveably slow. Produces enormous files
Price	Around £370
Verdict	Not a patch on Symphony
Score	3/10 (and none of these marks is for the page-numbering in the manual)

Computer Associates: SuperCalc 3	
Pros	Easy to learn and use. Very easy graphics. Cheap. Lots of experts to help on this one
Cons	Small, slow and out of date.
Price	Around £195
Verdict	Will probably be around for years and now comes in very nice plastic box
Score	6/10 (after all, we love it so)

We'd like to thank Innovative Software, SPI, Lotus and Grafox for letting us have the programs for review.

Classified

Free Small Ads

Free!

■■■ COMMODORE CLEAR-OUT: another of our perennial Spring-cleans has thrown up a few items of stock relating to a previous venture in Commodore home computers. Specifically, we have a dozen or so copies of Dennis Jarrett's Complete Commodore 64 book and many cassette dust-covers. Free to a good home — ie a non-profit cause like a school. Contact Roger Gann on 01-833 3501.

Apricot Sales

■■■ APRICOT F10 for sale — new, with software. Price £895 ono. Phone H Cohen, 021-454 2563 evenings.

■■■ APRICOT XEN FD needs a good home. Six months old, one careful owner; 512KB memory, dual floppies. Includes all standard software and a copy of A LA CARTE. Price £1,500 ono. Call 01-736 4281 office hours.

■■■ XEN HD with 20MB hard disk, 1MB RAM, paper-white monitor; plus SuperCalc and SuperWriter. Hardly used. Cost £3,500 plus VAT, will accept £2,500 plus VAT. Also available: WordStar 2000 and Epson LQ1500. Contact Mark Wardle on Gloucester 504294 (day) or 411402 (evenings).

■■■ APRICOT Xi20S with 1MB RAM, 20MB hard disk, 12in monitor, Mouse, Internal Modem, Juki 6200 printer. Nine months old, hardly used. Price new was £7,000 — will accept £2,800. Also available: external 20MB hard disk and tons of software if required (not included in price quoted). Messages on 0772 719325.

■■■ APRICOT Xi, as new and boxed. 10MB hard disk, 720KB double-sided floppy, 9in monitor; SuperCalc, SuperWriter, SuperPlanner. Cost £3,444 — will accept £1,495. Dust covers and Securicor delivery included! Phone 061-428 5975.

■■■ XEN multi-user system with two 256KB Apricot PCs and Oki Microline 193 printer plus Delta 4 (networked), SuperWriter, SuperCalc. Cost £9,000 in March, will accept £5,750 now. A first-class system, but unfortunately the business did not materialise ... Details from 031-445 2218.

Apricot Add-on Sales

■■■ ALPHA DISK XF400 IBM-compatible 5.25in disk drive (360KB) for use with Apricot Xi. Hardly used. Cost £275 — will accept £150, including delivery. Contact Paul Rowsell on 0727 22003.

■■■ 128KB RAM BOARD — full working order, no longer required. £55. Phone Frank Sendall on 051-425 4811 evenings (keep trying if no reply!)

■■■ F1 INFRA-RED MOUSE with light pipe and software. Low mileage, well-behaved. £50 ono. Contact 0734 732512.

■■■ 9in MONITOR for sale — green screen, black casing. Good condition. Price £50. Contact 06512 2667.

■■■ SIRIUS TO APRICOT file transfer package. Official ACT version: cost £109, bargain at £45. Contact 061-428 5975.

■■■ 9in APRICOT MONITOR green screen, black case, includes carrying case. As new, used only on Sundays, etc. Price £50. Contact Paul Lavin on 01-451 1951.

Other Sales

■■■ APRICOT WRITER 22 printer (really the best-selling Epson LX-80 with an Apricot badge). 100cps, 22cps in NLQ mode; twelve typestyles; supported by most WP packages. Ten months old, excellent condition — owner wanted something faster. £160. Tel Don Morrison on 01-235 1609.

■■■ OSBORNE 1 double-density disks, 64K, with SuperCalc, WordStar, MBasic, CBasic, all cables. £250 ono. Tel M Nash, 0742 307692 (home) or 0742 66922 (office).

■■■ COMMODORE 8030 — 32K memory expanded to 96K, twin 8050 disk drives; Pegasus ledgers, Landsoft WP, TLO program generator, CalcResult; all documentation and cables. Good working condition — £500 ono. Tel M Nash, 0742 307692 (home) or 0742 66922 (office).

■■■ WORDPERFECT Ver. 4.1 for use with Xen-i or any IBM-compatible. Unopened and complete. A bargain at £300 ono. Contact I Bryce on 0603 630326 in working hours.

■■■ EPSON RIBBON CARTRIDGES for sale — brand new, boxed, made by Epson and Caribonum. We've found half a dozen that we bought for an Epson we no longer have ... Price £5 including postage, or all six for £25. Phone Roger Gann on 01-833 3501.

■■■ PSION ORGANISER — original program and datapacks, RS232 link-up, documentation. Boxed. £40 ono. Contact Mike Nash on 01-671 8644 (home) or 01-584 5000 x 3545 (office).

Wants

■■■ WANTED: Apricot Xi FD or HD with 512K and 9in monitor. Must be in good condition and full working order. Tel M Nash, 0742 307692 (home) or 0742 66922 (office).

■■■ WANTED: Delta 4 or Tomorrow's Office for Xi with 512KB and 10MB. Contact 0379 71246.

■■■ WANTED for Apricot 10Xi: Alpha, Simon or Multicard expansion box. Phone Brian on 0992 468870 evenings.

■■■ PORTABLE PROBLEMS — I have an Apricot Portable without monitor interface and version 1.6 boot ROMs. Can anyone in South London offer advice on modifying/rectifying these? Could swap software for help ... Contact Mike Nash on 01-671 8644 (home) or 01-584 5000 x 3545 (office).

■■■ CHEAP TURBO PASCAL WANTED by student, to help with studies. Write to Martin Norman at 14 Spurr Court, Foxwood, York.

■■■ LOAN OF PORTABLE DISKS WANTED — Dixons muddled up the disks I should have received, say there's two months delay on replacement, and have certainly omitted at least the Voice disk. Can anyone help? Contact Paul Anderson, 01-868 4499 ext 263 (office hours) or 02518 3470 (evenings).

■■■ DR LOGO — can anyone alter DR LOGO for the F1/F1e to run on the F2? I have tried Apricot dealers without success and the long-promised £30 DR pack still hasn't materialised. Contact David Stirling at 28 Ingleston Avenue, Dunipace, Denny, Scotland.

■■■ DATABASE/FILING PACKAGE (Palantir or Cardbox preferred) and A.S.D. Superwriter disk. Exchange IANKEY touch-typing tutor, GRAMMATIK grammar checker, PROOFREADER spelling checker (full working copies with documentation) — cash difference either way. Phone 095 786 261.

Misc

■■■ A0 PLOTTING — time on a Calcomp A0 plotter available for rent: Sirius or Apricot disks plotted on your paper or ours. Terms negotiable, but cheap. Phone James McEvoy on 01-859 4014 or 01-852 7981; or write to 16 Dunvegan Road, London SE19 1SA.

■■■ SIRIUS-APRICOT TRANSFER: any program and/or data transferred from Apricot to Sirius format and vice versa. Just send your disks along with £5 for the first one and £1 for each disk after that: P&R Miller, 8 Hillside Close, Hednesford, Staffs WS12 4DG.

Help

■■■ SANYO AND APRICOT: can anyone suggest how I might format 3.5in disks so that both my Sanyo MBC-555 and my Apricot can read me? Also, does anyone know where I can obtain Concurrent CP/M-86? Contact Bob Wilcock on 01-888 8304 (evenings).

■■■ SWITZERLAND: Apricot user would like to contact others, preferably in the Zurich area, to exchange experiences and help each other with problems. Contact John Solomir, Stockenstrasse 67, 8802 Kilchberg. ◆

User Experience

Reflections in a green eye

Working with a Xen-xi 10

By Paul Lavin

Just because I bought one of those new-fangled 'industry standard' Apricots doesn't mean that I'm about to stop using (or dare I admit it? Enjoying!) the other Apricots within my domain. My stable remains populated with a PC and a Portable supplemented with occasional use of a genuine Xen.

But after greasing my bank manager and getting my dealer in a hammerlock, I took delivery of a shiny new Xen-xi 10.

Apricot has certainly done the thicker elements of our species a great service by enclosing detailed, illustrated, multi-step brochures on how to get the thing out of the box. What a pity Apricot's new found mastery of documentation didn't spill over into the operations manuals ...

Thanks for the memory

Not content just to slip the little darling out of her cardboard shipping container, with screwdriver bared I decided to take a peek inside and see just what the punters have to pay £2,000 for (I got a deal that this article will probably ensure goes unrepeated). Lest you think dismembering a brand new computer is a brave or foolhardy move, there's a section in the manual entitled 'Routine Tasks': one of the subheadings in that chapter is 'Removing the Power Supply'! Routine indeed. The manual also expounds on moving motherboard jumpers to install different monitors, change the clock speed or disable on-board functions ... *Not* for the faint-hearted.

Alas, there must be very few manufacturers to bring out a new computer in 1986 with a motherboard that is fully populated at 512K. Clever, those lads at Apricot. To get any closer to the paltry 640KB limit of IBM PC software you have to spend more money; no matter, Plus 5 says they will gladly help you out for £250 with a daughterboard assembly that plugs into a cute little socket on the motherboard.

One problem is that the persons responsible for writing Plus 5's advertising copy have forgotten to tell anyone in R&D or stock control that such a product exists. I couldn't convince them. Perhaps you'd like to try?

The other problem is that the memory expansion socket is located directly beneath the now-internal power supply. A ribbon cable connector will probably fall down due to timing problems. Will there perhaps be a modification kit to turn the power supply into a Xen-like footwarmer in time for the winter's worst?

The daughterboard method of RAM addition is appealing because the boards can be stacked to multiply capacity. This method also obviates the necessity of using up one or more of the sparse supply of expander board slots.

Or for a trifling £99 (all prices exclusive of VAT, as they say) you can get a card carrier that will hold one IBM PC style card and two AT-format half-cards. As an additional benefit to this mode of memory expansion, I will later be able to spend more money on IBM's alphabet soup of monitor interfaces, CGA or EGA or PGA or whatever they can think of next.

Since my other Apricots are well stocked with 512KB RAM cards I thought that I would accept the offer of a PX adaptor that would allow me to use my old Apricot-compatible memory: the adaptor is only another £50.

Apricot has made a rather major boo-boo with the memory capabilities of the Xen-xi 10, however. Although the lovely full-colour promotional material says you can expand internally to up to 6.5MB, in actual fact you can't get from 512KB up to your first megabyte at this time. Back goes the PX adaptor.

This was a big surprise to my dealer. After raising his consciousness (and undoubtedly his blood pressure) about this detail, he got Apricot to cough up. He has promised a free upgrade to 640KB and to "do something" for me as soon as Apricot cobbles together something that will fill the hole between 640KB and 1MB. Apricot nearly got the blasted thing back over that one.

Inside the rugged Xen-lookalike plastic box and beneath the sturdy chromate plated anti-radiation shielding — the computer is held together with sticky tape! Yes, indeed, Roger Foster's pride and joy comes complete with one (of two?) battery packs and the speaker glued to interior bulkheads with hi-tech designer Sellotape. I wonder what will happen some hot summer day when the stickum gives up its ghost and deposits those aforementioned conductive objects directly across the terminals of some vital IC?

Disks

I bought a machine with an internal 3.5in drive not out of sentimentality but because that is the way the world is going. But the dealer and the sales brochure maintain that in addition to the Apricot-compatible 720KB mode, the new Sony drive will format to 1.44MB in quad density. Just try it! After repeated error messages a call was made to the dealer. "What's wrong?" sez I. "Wrong disks" sez them. "Sell me some, then" sez I. "Not available" they replied. Click said my telephone.

What's the use of having IBM-compatibility without being capable of playing the computer age's equivalent of a 78RPM record? Of course, I ordered an external 5.25in drive. After they took my cheque for the entire order, I learned that "unfortunately" the drives were out of stock. Several threats and a week later, I finally got it.

The 10MB hard disk is delivered all set up and chock full of the sort of useless junk craved for by the people who adore WIMP front-ends. The only reason for keeping Windows that I can see is the

terminal setup routines and that marvelous little game, Reversi.

Oddly enough, the machine also came with GEM. Not being a microrodent abuser, I am just not interested. GEM was swiftly downloaded to floppy and deleted from the hard disk, as was Windows Paint. Even with a couple of substantial applications loaded up, I've still got 6.5 megabytes free after I did my housecleaning.

Standards?

More fun and games. Instead of the customary 25-pin D-type RS232 socket we've all come to know and loathe, the serial port terminates in a nine-pin connector as used on the IBM PC/AT. Try to get the pin assignments from a dealer; you're more likely to get a date with his daughter and the keys to his Jag as well.

It's standard, all right. Right down to the parallel port that looks just like an Apricot *serial* port on the computer end. Was IBM angry at Centronics when it designed the PC? Luckily, millions of others have been down that road before so that the strangely configured printer cable is available at every corner computer shop.

There are some IBM standards that Apricot has decided to ignore. Quality documentation is one. Although the manual tells you how to remove the power supply and install a disk drive, it neglects to cover little things like how to format 3.5in disks: how to reconfigure the MicroScreen: how to use any MS-DOS commands other than COPY, DELete and DIRectory ... the list goes on. And there is one single, solitary paragraph on GEM. Good luck to anyone who wants to use it. Isn't it supposed to be intuitive, after all?

The manuals that came with the disk drive, card cage and PX adaptor were all artfully contrived to mislead even the most careful reader. The biggest problem was the fact that they were to be used for other models and were therefore totally useless for my machine.

The keyboard has a slightly funny layout and the function keys have lost their handy labels; I guess I'll just have to adjust. They left the MicroScreen, thank goodness.

Last word

The xi 10 is fast, quiet and compact. Despite all the above, I like it a lot.

One last admission. The title of this article is a lie. The dealer had to loan me a paper white monitor because of an 'unfortunate' backlog on deliveries of the green ones. So the 'eye' of which I wrote isn't green at all. Somehow starting out this story with a harmless misstatement seemed in keeping with Apricot's new relationship with me.

Toeing the IBM-standard line doesn't alleviate any Apricot headaches, it will just give the IBM world an appreciation of how good we (masochistic) Apricot owners have had it all along. ◆

The SoapBox

Tell us what you do and don't like about this issue. Just complete the analysis panel and add any notes — what you'd like to see in the future, whether you want more or less of a particular author, or any remarks you'd care to make; then tear off the form or copy it, and send it to our FREEPOST address.

APRICOT FILE, TP Group, FREEPOST, PO Box 509, London N1 1BR

Article	< Interesting				Uninteresting >	Comments
Columns:						
Doodles by David	☐	☐	☐	☐	☐	
New Year Reflections	☐	☐	☐	☐	☐	
Reviews:						
WorkMate	☐	☐	☐	☐	☐	
MT290	☐	☐	☐	☐	☐	
Xen-xi10	☐	☐	☐	☐	☐	
Four Apricot books	☐	☐	☐	☐	☐	
Workshops and Technotes:						
Printer control	☐	☐	☐	☐	☐	
Bandage & Plaster update	☐	☐	☐	☐	☐	
Regulars:						
News	☐	☐	☐	☐	☐	
Readers' Writes	☐	☐	☐	☐	☐	
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Prospero prospers

Prospero Software is one of those British software suppliers that has carved a niche for good-quality products — Pascal and Fortran compilers in this case, with 7,000 users worldwide. The latest offering is an MS-DOS version of its **Pro Fortran-77**, already available in 68000 format for Atari ST and Sinclair QL. Our resident Fortran enthusiast waxes lyrical about the functionality, performance and overall quality of this compiler: Prospero is on **01-741 8531**.

Laser printer update

Hewlett-Packard is promising a pair of upgrade boards for its Canon-engined laser printers. At present the LaserJet comes with 512KB, the LaserJet Plus with 1MB memory: a new **2MB board** for either will provide a lot more room for graphics and resident fonts. And there's a new board for HP's **Document Description Language** — DDL is an alternative to the widely-used PageMaker page description language, scoring primarily because it handles multi-page documents (with PageMaker you can only define individual pages). Release is scheduled for the New Year, prices will be pretty high.

Meanwhile the arrival of newer and cheaper laser printers from smaller manufacturers continues to offer possibilities. From **Citizen** comes the first of what's expected to be several options: the Overture 110 is a 10-pages-per-minute 5,000-pages-per-month printer based on the largely unknown Mita engine. Its graphics and font capabilities are limited, so the price tag of around £2,400 will be justified by output volumes.

Going a bit faster for around £100 more is the **Printronix** Personal Laser — 12ppm, 10,000 pages a month. This one looks like a more general-purpose machine, and emulation of the HP LaserJet Plus is included.

Those two should be available early in 1987. Right now you can buy a rebadged Centronics PP8 from **Zygal Dynamics**; this neat Sharp-based printer is conventionally rated at eight pages a minute. Zygal's price is £1,995, the straight Centronics RRP — which happens to be the lowest list price for a laser printer we can find in the UK right now.

Citizen, incidentally, is best-known for its matrix printers. After a first flush of enthusiasm, we aren't quite so keen on them these days — there's still fierce competition in this business, and in some respects Citizen appears to have achieved its modest prices by compromises. Still, the company says it has just shipped its 80,000th printer in Europe after 14 months' trading: they couldn't have achieved that with a duff product line.

- Hewlett-Packard 0344 773100
- Citizen Europe 0895 72621
- Centronics 01-581 1011
- Zygal Dynamics 0869 253361

More modems

Hayes modems established standards for autodialling commands (the AT command set) and have an excellent reputation for quality. On the other hand, the UK launch of the company a few months ago led to some adverse comment about the high price of Hayes' 1200bps offering.

At least the **Smartmodem 1200** has been reduced slightly to a still-uncompetitive **£425**. More important, there's a new **Smartmodem 2400** for asynchronous *and* synchronous comms at 2400bps, meaning one modem and one RS232 port will do for the usual public databases (async) and for talking to mainframes (which almost always require synchronous comms). Since this end of the market isn't too sensitive to price, the RRP of **£725** may not prove so much of a deterrent ... Hayes is on **01-847 5521**.

Meanwhile one of the better-looking of the home-grown alternative manufacturers has come out with a better-specified but pricier alternative at the 1200bps level. The Dowty Minimo Plus 3 is a multispeed modem (1200/1200, 1200/75, 300/300bps) with automatic line speed detection, autodial and autoanswer, and Hayes-compatibility. The price is **£525**, Dowty is on **0635 33009**.

Silent briefcase printer

Briefcase-size computers need briefcase-size printers, or so the argument goes. Epson and others have already tried this, though with electrostatic technology (the printer works by affecting the surface of specially coated paper). Now a Kodak company called **Diconix** is essaying the supposed market; Diconix was formerly **Mead Data Systems**, and in that guise it had one of the very first patents on ink-jet printer technology (*circa* 1972). Diconix is well-known in specialist print applications, but the battery-powered **Diconix 150** is its first generalised product — a 4lb 150cps Centronics-interface printer that measures 6.5x10.8ins and sits 2in high.

It claims a "full" emulation of the Epson FX and the IBM ProPrinter, unlike most of its predecessors; there's a variety of print styles, including a near-letter-quality mode; it can print on to just about any paper; and the batteries should be good for 150 sheets. For this you pay something of a premium price: **Norbain** has the 150 at **£399** — call **0734 868855**.

Casualties

Brikat is joining the trend set recently by **Interface**, **Granada**, **First Computer** and **Entré** in confirming the lack of commercial promise for High-Street retail outlets. Having lost half a million in the last 18 months on its business centres, Brikat is shutting down two of its nine stores and selling off the others.

And **Apstor**, specialist in add-on removable cartridge-disk subsystems, ceased trading in December to look for a buyer. Cashflow problems are blamed; **Micro Technology**, the other significant UK manufacturer of Bernoulli-technology mass storage, is to provide support for Apstor users and must be the prime candidate for acquiring Apstor's assets.

PC-FILE Free upgrade

Previous purchasers of the only 'shareware' disk in DEALS FOR READERS, AP017 PC-FILE III, will have noticed a number of shortcomings in the IBM emulation under which this IBM PC must run on the Apricot — such as non-working cursor and function keys. These problems have now been tracked down to the IBM.KB file; we have now substituted the correct scan codes for the gibberish left there by our friends at Apricot Advanced Tech.

If you have bought PC-FILE and would like a copy of the corrected keyboard table, send us a note telling us what is wanted and a blank, formatted disk with a stamped self-addressed mailer. We shall do the rest — gratis!