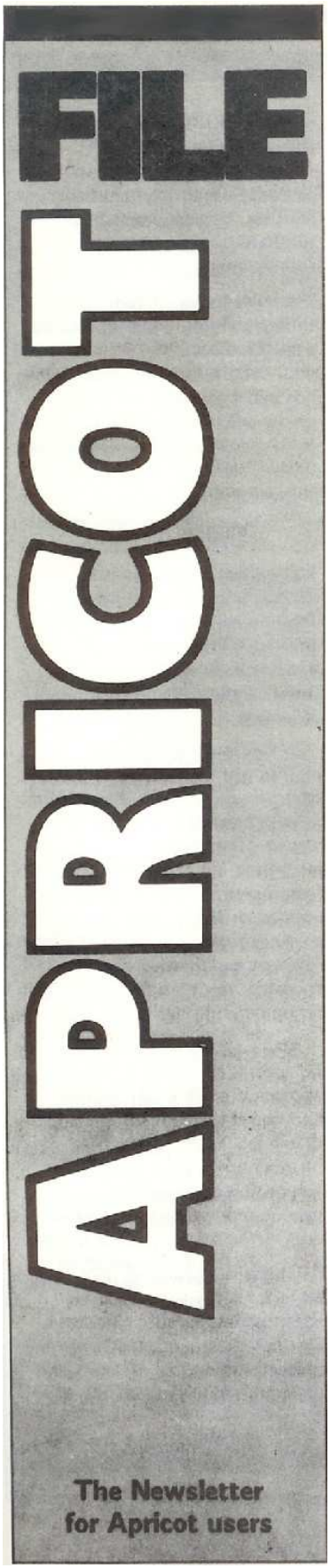
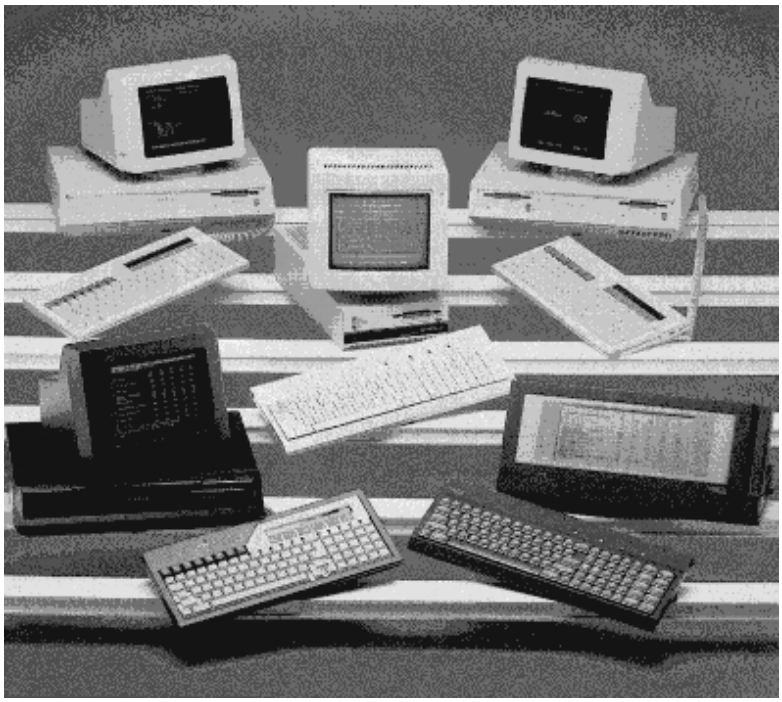


Apricot File 2_3



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

Release 2.3

FILE APRICOT

The Newsletter for Apricot users

December 1986

Apricot in transition

Half-year results, PageMaker details

By Simon Potter

As we (and Roger Foster) predicted, Apricot plc reported a return to profitability for the first half of 1986. Pre-tax profits to the end of September were **£2.5 million**, against the year-ago loss of £2.5 million: sales were down from £48.1 million to **£32.8 million**, which was to be expected — the inventory clear-outs didn't generate that much cash, and the Xen/Xen-i are still getting under way.

It seems **900** Xen-i systems were sold between June and October, though Apricot is now saying that this line will contribute substantially to profits in the second half. All the Xens between them represented just under £1 million of those sales.

The good news this time around once again came from two of the less glamorous activities: **Apricot Computer Maintenance** and the doing-good-by-stealth operations of **ACT Financial Systems** between them provided nearly half the profit. Apricot's French subsidiary continues to disappoint, turning in a £750,000 loss — it doesn't yet have the Xens to sell, but then there's fierce competition in France for such machines.

Apricot withheld its dividend, and that combined with the slightly qualified nature of the profit report meant the share price still hangs around 55p. The revised end-of-year target is £60 million in sales, and we'd expect Apricot to hit that with profits of £5 million or so: there probably won't be a full-year dividend either, but in six months' time we anticipate the share price being over 75p. Our advice — if you fancy a flutter with some of the money you've earned from a quick sale of your British Gas shares, Apricot might not be a bad short-term speculation.

Meanwhile Apricot has detailed its entry into one of the added-value areas designed to improve its financial standing and corporate image, desktop publishing. For a starter price of **£5,999** you get a Xen-xi 10 (512KB, 10MB) with the Hercules-compatible paper-white monitor, Aldus PageMaker and a Microsoft parcel including MS Word and Windows, and Apricot's Kyocera-built laser printer.

That's quite a competitive price, particular against the Apple alternative, though our experience suggests that 512KB isn't really generous enough for really clever desktop publishing. For another grand you can have the 1MB memory and 20MB disk of the Xen-i XD.

Existing Xen-i users can have the printer with PageMaker and the desktop publishing software at an upgrade price of **£3,999**, a saving of about £100 on list price for the individual items. PageMaker alone is **£595**, and buying the bits separately might be an option

CONTINUED ON PAGE 3

In this issue

The SoapBox	31
The Disinformation Column	4
Review: TOPCLASS tutorial authoring language	6
Technote: Speeding up Turbo Pascal output	9
The Workshop: Overseas mail and SuperCalc	10
Readers' Writes — letters to the Editor	15
The Workshop: Health Care revisited — generalised backup	17
Deals For Readers	20
Free Small Ads	24
Review: Apricot Xen-i — how compatible?	25
Doodles by David: Tips and Tricks	28
News of the Apricot World	30

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worth considering for existing Xen-i users with Windows since it supports text files produced by other word processors than MS Word — MultiMate, WordStar 3.3 and 2000, WordPerfect, any ASCII-format text. And this version of PageMaker will print to "any" Windows-compatible laser printer. That includes the Hewlett-Packard printers, and of course Apricot's Kyocera (which emulates HP's PCL control codes). Our choice for the text processor would probably be WordPerfect; Apricot's printer is quite competitively priced, but there are cheaper alternatives.

The one-stop-shopping angle is quite appealling, however, particularly with a relatively complex and therefore quite delicate combination of interlocking compenents.

Aldus plus Microsoft

There's a bit of a backlash in the computing business right now about the 'desktop revolution' hype. Most of the industry's gurus seem to be coming around to the commonsense view that desktop publishing is at best a new facility among many for word processing; and that it will represent limited requirement as a special application area. In short, it won't provide the software business's next boom in the same way as spreadsheeting or SideKick-style desktops.

That doesn't mean desktop publishing is a chimera, though, and it doesn't mean there won't be a lot of bandwagon-riding in the next 12 months or so. Desktop publishing happens to be a natural fit for the current state of hardware technology — fast processors, big memories, cheap hard disks, and of course the proliferation and falling costs of laser printers.

And despite the availability of a raft of competitors, **PageMaker** — with some 30,000 Mac installations already — looks sure to become a market leader when mass sales of IBM-compatible desktop publishing packages cause Apple's star to fade over the next two years. In terms of facilities and functionality it faces strong competition from **Ventura Publisher**, backed by the worldwide marketing resources of Xerox, but at least the IBM-style PageMaker is a significant advance on the Mac version — most notably you get improved hyphenation (dictionary-based), the ability to work with larger documents, and considerably more of the typographic features such as kerning which currently distinguish a conventionally-typeset document.

Most of the better general-purpose desktop publishing packages demand a graphical environment so that you can see on the screen more or less exactly what the laser printer will print — complete with rules, borders, font changes, and complete page layouts. Currently of course there are two such ready-to-go offerings — Microsoft **Windows** and Digital Research's **GEM**. Marketing-wise, Windows appears to be winning the battle: it's offered as standard by several dozen manufacturers, and Microsoft reckons that over 500 software suppliers have indicated that they are developing applications specifically to run under Windows.

Ventura Publisher opted for GEM, but Aldus have decided to go with Windows for the IBM version of PageMaker. And that has produced an "alliance" between Microsoft and Aldus which should increase the take-up both of Windows and of PageMaker.

The two companies have collaborated in parcelling PageMaker with Windows and Microsoft's own Windows-based applications — Windows Paint and Windows Write already provide basic graphics and word processing within Windows, Windows Draw and Microsoft!Word are real-world extra-cost packages with a decent level of capability. Draw, which Microsoft has licenced from US software house **Micrografx**, is fine for producing business graphics that might be incorporated into a PageMaker document: Word is superior as a word processor to PageMaker's own editing — notably because of its clever 'style sheet' facility for defining and storing document formats.

At the product level, however, there won't be too much evidence of collaboration. It's in marketing and support that the 'alliance' will make itself felt.

Fiona Kelly, Microsoft UK's Marketing Services Manager, put it bluntly: "We want to establish Windows, PageMaker, Draw and Word as the standard for desktop publishing in the same way as we have MS-DOS for operating systems". So the two companies are presenting the combination jointly to interested computer manufacturers — and Apricot is one that has already signed up. And they will be running two-day dealer familiarisation courses jointly. Derek Gray of Aldus UK describes the collaboration as "the perfect partnership from which to establish a standard", and that's obviously the aim of both parties.

Last word

Interestingly, at the launch of Apricot PageMaker — to which our esteemed editor did *not* receive an invitation — Microsoft UK MD **David Fraser** gave a short intro to desktop publishing. To illustrate the advantages, he held up one of the *Financial Times* newsletters with a comment to the effect that "one day all newsletters will look this". The *FT* doesn't use PageMaker: it has Cognita Software's NEWSWRITER package ... which is what we utilise for APRICOT FILE and all other TP Group newsletters. ◆

The Disinformation Column

On Volutes, Fluting and Acanthus Leaves

By David Langford

The *Encyclopædia Britannica* tells me there are five varieties of column: Tuscan, Doric, Ionic, Corinthian and Composite. (See, all knowledge can be found in computer magazines.) Personally I write a sixth sort, variously known to architects as the Irregular, the Seldom or the Bitty ...

A thing of shreds and patches

People are always asking for more examples of program patching with DEBUG, so here goes with another worked example. Today's problem is SORTDISK.COM, a public domain directory-sorting utility to be found in various places including the DEALS FOR SPENDTHRIFTS disk AP002.

Xen users find it refuses to run: this turns out to be because it uses MS-DOS 2 functions not available in MS-DOS 1; and therefore it prudently checks that it's running under MS-DOS 2, the programmer not having thought ahead to the possibility of MS-DOS *3*.

You know the routine by now, I hope. Spare disk, spare copy of SORTDISK, and enter:

```
DEBUG SORTDISK.COM
```

(If you're doing this under MS-DOS 3 on a Xen, the computer will immediately hang up: ho ho. Reboot with MS-DOS 2.11, pinched from your nearest Xi owner. More of this in a moment.) Start by looking at the beginning of the program: COM files tend to kick off with a jump (to skip over various bits of data). Type 'U' for Unassemble at DEBUG's hyphen prompt; in what follows the DEBUG segment numbers, which aren't relevant to this bit of detective work, are represented by XXXX.

```
-U
XXX:0100  E95902  JMP 035C
```

So the important bits start at address 035C. Since the test for DOS version number is evidently one of the first things SORTDISK does, it makes sense to have a look at the code at 035C straight away:

```
-U 035C [CR]
XXX:035C  BA0301  MOV DX,0103
XXX:035F  B409    MOV AH,09
XXX:0361  CD21    INT 21
XXX:0363  B430    MOV AH,30
XXX:0365  CD21    INT 21
XXX:0367  3C02    CMP AL,02
XXX:0369  7406    JZ 0371
```

... That's quite enough, thanks. The first three instructions use MS-DOS function 09, 'display string', to show the start-up message lurking at address 0103 (you could ask DEBUG to reveal this by typing D 0103). The next two are more interesting: MS-DOS function 30 (hex) is 'get DOS version number', returning the 'major' and 'minor' bits of the number in AL and AH respectively. For example, MS-DOS 2.11 would give '2' in AL and '11' in AH.

"Aha!" cries the great detective through languid, half-closed nostrils. The instruction at 0367 compares AL with '2', and the JZ 0371 skips to the program proper if and only if AL does hold '2'. (An error message and swift euthanasia are waiting just ahead, if the jump isn't executed.) In other words, MS-DOS version 1 is 'trapped' by intention — and MS-DOS 3 by accident.

The game's afoot, Watson. Correcting this is actually rather simple. The neatest alternative is to replace the JZ ('jump if zero flag set') with JNC ('jump if carry flag not set'). The CMP operation subtracts 2 from the contents of AL, setting the zero flag if the result is zero and the carry flag if AL is less than 2 ... so doing it this way makes MS-DOS 3 acceptable.

Start with 'A' for Assemble:

```
-A 0369
XXX:0369  JNC 0371
XXX:036B
```

Write the result back to disk and leave DEBUG:

```
-W
-Q
```

... and with that the deed is done.

Now a shorthand version, for readers whose cheapo old-style DEBUG doesn't support the Assemble command. Using Unassemble again, it can be seen that the earth-shaking effect of all the above is to change one byte (at 0369) from '74' to '73' hex. (Using Unassemble with my DEBUG also reveals that although you've entered JNC, DEBUG shows it as JNB ... indeed it'll also accept JNB and give the same result.) Using 'E' for Edit will do just as well. So, in condensed form, here's what you type — don't blink or you'll miss it:

```
>E 369 73
```

Meanwhile, is there a cure for DEBUG's habit of hanging under MS-DOS 3? Well, this DOS is standard on the Amstrad PCW1512, and it seems that the supplied (Apricot please copy) DEBUG.EXE (no, not .COM) has accidentally fallen off an RS232 connection on to the very disk carrying this column to APRICOT FILE. Will it work on the Xen? I have no idea ...

A thing of SHIFTs and batches

The people who write articles on batch files are curiously unanimous about one particular point. They mention the SHIFT command, if at all, in tones of derision: "I've never figured out any conceivable use for this".

Well, I occasionally copy public domain stuff to others' disks, taking advantage of the fact that the files tend to come in clumps — for example, PUBLIC.COM, PUBLIC.OVL, and PUBLIC.DOC. So I'd find myself typing COPY PUBLIC.* B:, and then COPY FREEWARE.* B:, and so on until the pubs opened. Then I came to my senses (a long while after the pubs closed) and wrote C.BAT, thus:

```
ECHO OFF
LOOP
```

```
IF %1z == z GOTO DONE
IF NOT EXIST %1.* ECHO No `%1' files!
IF EXIST %1.* COPY %1.* B: /V
SHIFT
GOTO LOOP
DONE
```

The despised SHIFT makes this very handy: if I type in ...

```
C FREEWARE BOOTLEG PUB*
```

... I can go and do something else while my selections are copied in turn. The first command line parameter (addressed by %1) is FREEWARE, so all the FREEWARE* files are copied. Then SHIFT shuffles along the command line parameters so that %1 becomes BOOTLEG, and GOTO LOOP backtracks to repeat the copying. On the third pass, PUB* moves into the limelight, copying all the files starting with PUB, PUBLIC and PUBIC. Finally, SHIFT moves the nonexistent fourth parameter into the %1 spot, the third line of the file detects the fact that %1 is now a null, and execution transfers to the :DONE label for a nice sit-down and a cup of tea.

Cheapskate corner

Cables and leads are strangely expensive when bought from real dealers, and there seems to be a dearth of published info on doing it yourself. I wanted to link an Xi with an IBM clone to transfer a few files (for excellent ideological reasons such as Sod It, I'm Not Buying Another Assembler Just To Get It On A Different-Shaped Disk).

The missing link was an RS232 cable, which took all of 20 minutes to suss out. Five minutes was enough to ring **Maplin Electronics** on **0702 554161** and order a 25-way plug for the Apricot end, a 25-way socket for the IBM end, a plug cover for each, and a few metres of four-core screened cable (Maplin order codes YQ48C, YQ49D, YQ50E and XR92A respectively, total cost £5.28 plus 35p per metre of cable, including post and VAT).

Next day the parcel came and I duly followed the complex wiring instructions received from awesome Pangolin Systems Ltd over many pints of beer: pin 3 of one plug to pin 2 of the other, and likewise pin 2 to pin 3; pin 7 of one linked to pin 7 of the other (only these 3 wires of the cable's 4 are actually used); pins 4, 5, 6 and 8 of one plug all wired together, and ditto at the other end.

Just to make life easy, the pin numbers appear in tiny bas-relief on the plug itself. You can't go wrong, unless you have a soldering iron like mine, the large economy size designed for soldering four pins at once or doing away with Edward II ...

But in defiance of all probability the set-up worked first time, happily transferring files at 9600 baud, and I had enough change from the notional price of a 'real' cable to buy a new soldering iron. Or a bottle of whisky. Decisions, decisions ...

Mea culpa

Incredible though it may seem, I have been known to get the occasional thing wrong. (Oh dear — the Editor seems to have fainted). For example, a little while back I mentioned the Apricot BIOS interrupt F1H as the niftiest way for an assembler program to send a character from the AL register to the screen. Immediately 5,271,009 readers rushed me gleeful postcards saying "It doesn't work!"

Well, I blame Roger Foster: although the interrupt is documented, and works fine in PC/Xi BIOS 2.7 and 3.1 as well as all the F Series BIOSes I know, it mysteriously doesn't in rotten old PC/Xi BIOS 2.4. Rats!

If you run into this, use the MS-DOS interrupt 29H instead: the syntax is identical.

Again, foolishly believing what older and wiser programmers told me, I have muttered from time to time about the lack of an ANSI.SYS screen driver to handle the fabulous ANSI escape sequences. I've been pouring ashes over my head and wearing nothing but sheets from the *Technical Reference Manual* since being told that, actually, the ANSI codes are supported by Apricot's generic screen drivers ... though it's only fairly recently that they've worked reliably. Try it and see: does ESC [2J clear your Apricot's screen, for example? (And isn't it much more convenient to send than cumbersome old ESC E?)

Happily for my confidence, other people cock things up as well. I forget how many times I've seen the SET COMSPEC command breezily described (wasn't it Alan Solomon Himself who recommended it in *Apricot User* of lavender-scented memory?). The idea is that by commanding something like SET COMSPEC = C:\COMMAND.COM, and copying COMMAND.COM to a RAMdisk set up as drive C, you can escape forever from the pesky 'Insert COMMAND.COM disk in drive A' message: MS-DOS will look for it and load it from RAMdisk instead.

That's the theory. Has anyone actually made it work reliably on an Apricot? No matter how I tinker with the command (and I must be doing it right, because it works fine on the IBM clone), no matter how earnestly MS-DOS reassures me (in response to a command of SET alone) that COMSPEC has been set to C:\COMMAND.COM, the bloody Apricot still issues demands for COMMAND.COM in the drive I first booted from. If only these wizards of computing would stop writing stupid UNFORMAT programs and tackle the problem of how to boot from a RAMdisk ...

Footnote

Just in case any reader of APRICOT FILE should assume the reference to 'Aunt Sybil' in the OMRC ad shipped with Release 2.2 was meant for *us*, we'd like to say that we've never called OMRC "bootleggers" as seems to be implied. In fact we always refer to them extremely politely, as "those very wonderful and humane software dealers who we hope will very son get round to offering us royalties on the copyrighted Ansible utility which for a time was offered quite by accident as a 'public domain' file on the ScannerS disk". Merry Christmas, all! ◆

Review

Producing tutorials with an authoring language

Format PC's Topclass

By Mark Whitehorn

The concept of using computers for things other than number-crunching has been with us for some time. One of the applications which has attracted much attention is in education and training — within formal education itself, and in business and industry.

Several software companies have produced 'authoring languages' geared specifically to the production of text and graphics on the screen. These authoring languages are designed to allow non-programmers to write tutorials, or to permit programmers to write them more rapidly than they could do in a more conventional language. At worst they let a user put just simple text on the screen; at best they can produce a complete teaching module with questions, graphics, bells, knobs and whistles.

To avoid any confusion here, the programs produced with an authoring language will be referred to as 'tutorials'. These tutorials can be of two main types — linear and interactive. *Linear* tutorials present the user with a set sequence of screenfulls of text or graphical information, the user having no control over the sequence of these pages.

Interactive tutorials, on the other hand, allow the user to control the direction of the tutorial. For example, at the beginning of a tutorial the student might be asked a series of questions to determine the current extent of their understanding: their answers would then determine the complexity of information subsequently presented. Or the student might be asked which area of the subject matter he/she would like to cover and then be presented with the relevant information.

We originally purchased one such authoring language, TOPCLASS, to write tutorials for teaching within the Department of Anatomy at the University of Dundee. Our experiences may be of help to other Apricot users.

Topclass is produced by Format PC and retails for £261. It's available for Apricot, IBM and IBM compatibles, BBC and RML Nimbus.

In use

Topclass is divided into a number of modules. These modules, all of which are accessed via a menu, are used in sequence to produce the desired tutorial.

CREATE is the first to be used. When loaded and run, it asks the author a series of questions and constructs the tutorial of your dreams from the responses. The tutorial is constructed page by page. The questions asked by CREATE initially establish the general type of page (such as text, graphics, question) and then enquire more specifically (type of graphics, type of question).

For example, if you indicate that a particular page will ask a question you will be quizzed as to the number of *correct responses* allowed, the number of *attempts* the student may have, and so on.

The CREATE module allows a large variety of page and question styles to be constructed. This process requires no programming skill at all and can be done by a complete novice.

When the process is complete you leave CREATE and load the RUNTIME module. This enables you to run your tutorial and discover all your terrible mistakes. It should be said here that the tutorial written by CREATE will contain no programming errors as such — it is guaranteed to run — but you are quite likely to be unhappy with some aspects of the overall effect.

The next port of call then is the EDITOR module where your mistakes are corrected and amendments made. There then follows the familiar sequence of run-and-edit until all is satisfactory.

It is also possible to write the entire tutorial in the EDITOR. To do this you'll have to learn the Topclass language (which is primarily a subset of Basic commands). Once you start this game, of course, you can produce the usual range of bugs possible with any language.

Extra features

Topclass has several features which may not be essential to an authoring language but do certainly add to its useability.

Topclass has good graphics capabilities, for instance. Diagrams can either be drawn freehand on screen using a mouse or the keyboard; or the IMAGE module can be used to produce images which can then be recalled and placed rapidly on the screen (in a fashion reminiscent of the GET and PUT commands of Basic).

Questions are an essential component of almost any tutorial, and Topclass has excellent question-and-answer facilities. It has the potential to store questions in a question bank and then withdraw them at random. The questions themselves may vary in style from the ubiquitous multiple-choice to simple yes-no response. A particularly useful feature is the ability to test a student's answer against the correct one, both as an exact match and as a 'sound-alike' — useful if you wish to test for understanding in your students rather than spelling ability.

The EDITOR module has a syntax checker which, during entry, checks each line for compatibility with the surrounding lines. For example, this could prevent the author from entering a line relating to a question in a graphics section. This is fine if you are actually writing the whole tutorial in the Topclass language, but unfortunately it throws a wobbly if used whilst editing a tutorial originally written in CREATE; in such cases, though, the syntax checker can be disabled.

The EDITOR also 'remembers' the name of the last file to be edited; during a long run/edit session, the correct file will be placed in the EDITOR by default.

The completed tutorials are reputed to be portable between all the machines capable of running Topclass. I haven't tested this feature, having only the range of Apricots to try.

Problems

There are a number of drawbacks with Topclass — some of which are irritating, though a few are critical.

For a start, using Topclass can be slow. The sequence used to produce a working tutorial should be CREATE-RUNTIME-EDITOR-RUNTIME, with RUNTIME EDITOR repeated until all is well.

Unfortunately it can take a long time to transfer from one module to the next. On a Xen, the move from RUNTIME to EDITOR takes around 15 seconds for a typical tutorial, and EDITOR to RUNTIME needs about 16 seconds. On an F1 these times are 36 seconds and 45 respectively. For the final editing of a program this can be very tedious. This is being improved for further releases ... but not for those of use who use Apricots.

There is no 'trace' function, so that bugs can be particularly difficult to find. (You don't write programs with bugs?)

The programs constructed by the CREATE module are very large. I wrote a tutorial which would occupy an average student for about one to two hours: this weighs in at an amazing 47 pages of program when listed. I would estimate that the same program written in Basic would come to perhaps 20. I wouldn't want anyone to think I'm mean with paper; the problem is one of getting lost in a maze of lines.

And if, like me, you like a hard copy of the troublesome section of a recalcitrant program, you're out of luck. There is no facility for listing part of the program to a printer: it's all or nothing. In practice this can be overcome by writing a large tutorial as lots of small ones and chaining them together.

This fragmentation into small sections also helps to overcome another fundamental problem of Topclass, which is that the tutorial programs it produces lack any sensible structure.

The EDITOR module cannot be used for the question bank with the result that you have to be careful writing the questions in the first place. Again, in practice this problem can be circumnavigated: the unwanted questions can be deleted and new ones added. But the process is very longwinded.

Perhaps the most serious limitation of Topclass is its failure to provide adequate facilities for producing interactive tutorials. I am of the opinion that *all* tutorials should be interactive: any tutorial which simply puts up page after page of text, diagrams and questions is just doing a bad impersonation of a text book. But if the CREATE module alone is used, it's impossible to make the tutorial interactive. So a complete non-programmer cannot initially produce useful tutorials.

By learning Topclass's language and using the EDITOR, it is possible to insert branch points and thereby make the program interactive. Even so, the facilities for producing complex interactive tutorials are primitive. For example, you might consider it essential to keep a count of how many times a particular section of a program has been used by a student and to be able to call in a different section if the visits have been frequent — for instance, calling a 'help' section if the student continues to make a particular mistake. This *is* possible in Topclass: but the structuring is very unwieldy.

Bugs

Topclass has its share of bugs, but most are fairly minor. The only really worrying one concerns SNAPSHOT, a memory-resident program which allows text or diagrams produced by other software packages to be incorporated into Topclass tutorials. This was in fact the main reason for our original purchase of Topclass.

In theory it's an excellent feature since high-quality images could be produced by packages such as DOODLE and then incorporated into an interactive tutorial. But its bug is quite simple: SNAPSHOT doesn't work. The initial release of Topclass didn't even have SNAPSHOT and when FORMAT PC provided a copy it failed to work: a further copy will work with some software but not all, despite the manual's claims. In short, if you wish to use this feature check carefully that it will work with your other software packages.

Support

Format PC is constantly improving the features offered with Topclass — including laser disc control from within a tutorial and so on. The problem for Apricot users is one which is going to plague us all from now on: Format PC will maintain support for the software developed to date, but won't update it. So there will be no laser disc control for Apricot users.

The manual is well-written. There are a couple of irritating mistakes, but they are few and far between. Anyone used to Apricot manuals will be delighted with the clarity of this one ...

But is the company generally helpful? This question might seem of little importance to those unversed in the ways of software houses. Anyone who has suffered from prematurely-released software will know the importance of support, however.

Well, I am happy to report that Format PC is one of the most helpful companies with which it has been my pleasure to deal. The people there are polite when answering the phone: this common courtesy should be unremarkable but it isn't . They are grateful for information concerning bugs, and then they really do remove said insect life from subsequent releases. Wonders of wonders, they actually ring you back after promising to — I was so unnerved when this happened for the first time that I couldn't remember why I had rung them in the first place.

All in all, nice people with whom to do business. And I must admit that I found them so pleasant that criticising the product caused me some pain; the company deserves to succeed.

Who should use Topclass?

Is Topclass a package for programmers? I think not. I found it a restricting and time-consuming language to use; and I felt I could write a better tutorial in, say, Pascal. But I did like some of the features, such as the graphics capability.

Is it for non-programmers? Well, a non-programmer who doesn't want to learn any language, and hopes to use this package in its modular form (that is by answering a series of questions on the screen and having the tutorial constructed for them) will never produce anything interactive, and is therefore unlikely to produce anything worthwhile.

What about non-programmers with an interest in learning to program? Format PC says this is actually how it envisages the use of Topclass. A non-programmer with experience could write initially using CREATE and produce linear tutorials. This will lead him or her to using the EDITOR to improve and expand them, gradually learning all the commands until CREATE can eventually be abandoned and the tutorials written entirely from the EDITOR. If this description fits you, Topclass would be a good place to start if you wish to produce tutorials. ◆

Topclass

Description:	Authoring language for production of tutorials
Supplier:	Format PC
Address:	Goods Wharf Goods Road Belper Derbyshire DE5 1UU
Telephone:	0773 820011
Price:	£261 for single copies, excluding VAT and P&P. A multi-user licence for 10 to 19 workstations is £130 per workstation, 20 or more come for £101 apiece
Configuration:	any Apricot
Conclusion:	Good graphic and question facilities, well-produced manual; but it is slow in operation, so production of tutorials can be tedious, and its control structuring is limited. Still, it represents a modestly-priced and adequately-featured introduction to computerised tutorial-writing for non-programmers who are willing to learn the commands.

Technote

Turbo Pascal:

Speeding up screen output

By Sten Ternström

Here's a little snippet for those of you who write in Turbo Pascal for your Apricots (all models). You will have found that regular screen output can be ludicrously slow; but being ardent readers of APRICOT FILE, you will know of a way around it. The idea is to call the BIOS screen handler directly using interrupt F1 hex, thus preventing MS-DOS from going about its bureaucratic ways.

I will describe two ways of doing this in Turbo. Both of them use the user-specified I/O-handling facility. The most straightforward is to declare a tiny procedure:

```
procedure OutChar(C: char);
begin
  inline ($8A/$86/C:   {  MOV AL, [BP].C  }
         /$CD/$F1);    {  INT F1          }
end;
```

And then, before any Writes to the screen, you redirect screen output to this routine by ...

```
ConOutPtr := Ofs (OutChar);
```

The predeclared integer ConOutPtr is overwritten; it does not need to be saved unless you want to restore normal output later in your program.

There are two drawbacks with this method: your source code will apply *only* to Apricots, and the programs can no longer have their 'standard output' redirected or piped by MS-DOS. A more intricate solution will eliminate these problems, but it requires that you make a copy of your TURBO.COM file, say APRITURB.COM.

We will use the UsrOutPtr variable instead of ConOutPtr. First write a program containing these statements:

```
Write ('UsrOutPtr = ', HexStr(UsrOutPtr));
Write (' at ', HexStr(Seg (UsrOutPtr)));
Writeln (':', HexStr(Ofs (UsrOutPtr)));
Write ('Cseg: ', HexStr(Cseg));
Write (' Dseg: ', HexStr(Dseg));
```

... where HexStr is the function shown below. Run the program, and note the numbers. They will differ according to which version of Turbo Pascal you are using; the regular 3.01 gives UsrOutPtr as $05F2 at <Dseg>:$120.

Unlike ordinary .COM files, Turbo programs have separate code, data and stack segments. Turbo keeps some internal variables (such as the I/O pointers) at the beginning of the data segment. Only the code segment is stored on disk, however; so Turbo must copy the default values of these variables to the data segment somewhere.

Using DEBUG, we can search through APRITURB.COM for a REP MOVSW instruction aimed at DS:$120 or thereabouts:

```
S 100 1000 f3 a5
```

The first occurrence happens to be the one we are looking for. Here, Turbo moves 1Eh words from CS:701h to DS:114h. So our default value of UsrOutPtr was stored at CS:701h+(120h-114h), which works out to CS:70Dh.

Now for the slick part. Still in DEBUG, type this:

```
- a 110
        push bp
        mov bp, sp
        mov al, [bp+4]
        int f1
        mov sp, bp
        pop bp
        ret 2
```

This adds a little routine which adds an INT F1 call to the Turbo runtime library. (It will overwrite part of Borland's copyright notice — which is safe, because Borland wouldn't touch that).

Now change the default UsrOutPtr to the address of the new routine and store your efforts:

```
- e cs:70d 10 01   (but replace 70d with the
                    address you found)
- w                (writes APRITURB.COM back to
                    disk)
```

Your new APRITURB.COM allows your Pascal programs to choose between standard output and INT F1 output, as follows:

```
Writeln ('This goes via CON and MS-DOS. Slow but
pipeable.');
Writeln (USR, 'This goes via USR and BIOS INT F1.
Faster.');
```

Note that UsrOutPtr should not be initialised in your Pascal source code. Further, since USR normally defaults to CON your source code will still work unmodified when compiled by a PC-DOS Turbo Pascal.

If you're not concerned about compatibility or piping and redirection, you could modify ConOutPtr instead of UsrOutPtr by using the DEBUG procedure shown. Since it too uses ConOutPtr, this gives the added bonus that the Turbo editor will become faster.

Even faster and much more sophisticated control over the screen can be achieved by calling the interrupt ECh screen handler introduced in BIOS 3.1. It offers not an escape sequence handler but rather a collection of BIOS calls for things like block moves, swapping multiple screens, multiple fonts, and suchlike. Get the BIOS 3.1 *Technical Reference Manual* if you're interested. ◆

HEXSTR

```
function HexStr(n: integer): aString;
  const
    hexDigit: array [0..15] of char =
    '0123456789ABCDEF';
  var
    h, i: integer;
    StrBuf: string [5];
begin
    StrBuf := '';
    for i := 1 to 4 do begin
      h := n and $F;
      StrBuf := hexDigit[h] + StrBuf;
      n := n shr 4;
  end;
    StrBuf := '$' + StrBuf;
    HexStr := StrBuf;
end; { HexStr }
```

The Workshop

Overseas mail

A SuperCalc template for postal rates

By Charles Frater

Our Apricot (twin single-sided 315K disks) was supplied with SuperCalc 1, and we were lucky enough to get a manual with it (although I find it paradoxical that you can learn more from the examples than the text).

From time to time we distribute video tapes worldwide for the world's largest manufacturer (distribution through London is faster than doing it from the USA). A SuperCalc spreadsheet provides our local postmaster with details of how much each parcel is going to cost, and saves much time in weighing and calculating.

Here is the spreadsheet (*with a few amendments from the* APRICOT FILE team — Ed). The learning curve which made this possible was associated with the LOOKUP facility in SuperCalc. Needless to say, this is *not* described as a major asset in the manual; but it is one of those things that you can find out about if you read in depth. As usual with this sort of thing, it is quite possible that I have not used computing power properly. That's the trouble about not learning the formal way. My attitude is pragmatic — just get the computer to work and don't worry too much about *how*.

The small box in rows 7 to 11 gives the weight of each parcel according to its contents, and column D refers to those parcels according to the type of video cassette that each recipient gets. An item code is entered, and a LOOKUP formula in column E uses that to insert the weight. The next column, F, contains a reference to a specific LOOKUP table according to the postal charge group.

Simple postal parameters such as the Swiftair or Express Delivery facilities are in a small side table (E7:I11). This is so that they can be changed quickly when the Post Office decides to up the rate.

The LOOKUP table could be calculated in a separate file and merged with the postal file using /Load Values. This way the information in each segment is free of formulae and no calculations are forced when the '!' command is typed in.

The main advantage of this is the time saved. Unfortunately with SuperCalc the whole spreadsheet is recalculated every time you press a key, unless you have specified Manual recalculation in the /Global command.

The result of all this is that a few minutes with SuperCalc enables us to produce a list of the destinations, the cost of each parcel, and the total cost for a mailing. SuperWriter is used for the mailing list using the mailmerge facility and advice letters, pro-forma invoices, delivery notes and labels produced. ◆

Building the Worksheet

Cell		Contents	Comment
A5 TL	=	"Item	column heading text
B5	=	"Code	column heading text
C5 TR	=	"Weight	column heading text
E5	=	"POSTAL PARAMETERS	heading text
A6 TL	=	'-	repeated dash for rule
D6	=	"-	ends rule
E6 TL	=	'-	repeated dash for rule
J6	=	"-	ends rule
A7 TL	=	"VHS	row heading text
B7	=	1	code number for VHS
C7 TR	=	350	weight for VHS
D7	=	"|	bar for vertical rule
E7	=	"| SWIFTAIR	vertical rule and row heading text
H7	=	1.50	extra charge for SWIFTAIR
J7	=	"|	bar for vertical rule
A8 TL	=	"BETAMAX	row heading text
B8	=	2	code number for BETAMAX

```
C8 TR      =   350                        weight for BETAMAX
D8         =   "|                         bar for vertical rule

E8         =   "| REGISTERED LETTER       vertical rule and row heading text
H8         =   1.20                       extra charge for REGISTERED LETTER
J8         =   "|                         bar for vertical rule

A9 TL      =   "U-MATIC                   row heading text
B9         =   3                          code number for U-MATIC
C9 TR      =   920                        weight for U-MATIC
D9         =   "|                         bar for vertical rule

E9         =   "| EXPRESS DELIVERY       vertical rule and row heading text
H9         =   1.50                       extra charge for EXPRESS DELIVERY
J9         =   "|                         bar for vertical rule

A10 TL     =   "U-MATIC + VHS/BETA        row heading text
B10        =   4                          code number for U-MATIC plus VHS or BETAMAX
C10 TR     =   1250                       weight for U-MATIC plus VHS or BETAMAX
D10        =   "|                         bar for vertical rule

E10        =   "| ADVICE OF DELIVERY     vertical rule and row heading text
H10        =   0.21                       extra charge for ADVICE OF DELIVERY
J10        =   "|                         bar for vertical rule

A11 TL     =   "2 x U-MATIC               row heading text
B11        =   5                          code number for two U-MATIC tapes
C11 TR     =   1650                       weight for two U-MATIC tapes
D11        =   "|                         bar for vertical rule

E11 TL     =   '-                         repeated dash for rule
J11        =   "-                         ends rule

A12 TL     =   '-                         repeated dash for rule
D12        =   "-                         ends rule

A14 TL     =   '=                         repeated equals sign for rule
Q14        =   "=                         ends rule

A15 TL     =   "DESTINATION               column heading
C15 TR     =   "Item                      column heading (part)
E15 TR     =   "Weight                    column heading
F15 TR     =   "Postage                   column heading
G15 TL     =   "Swiftair?                 column heading
I15 TL     =   "Registered?               column heading
K15 TL     =   "Express?                  column heading
M15 TR     =   "SUBTOTAL                  column heading
N15        =   "Advise?                   column heading
P15 TR     =   "TOTAL                     column heading

C16 TR     =   "code                      column heading (part)
G16 TL     =   "[1 for Yes]               instruction text
I16 TL     =   "[1 for Yes]               instruction text
K16 TL     =   "[1 for Yes]               instruction text
N16 TL     =   "[1 for Yes]               instruction text

A17 TL     =   '-                         repeated dash for rule
Q17        =   "-                         ends rule

A19        =   "UK destinations:          subheading
A20 TL     =   "UK                        sample destination entry
C20        =   1                          sample item-code entry
E20        =   LOOKUP(C20,B7:B11)         checks and enters weight
F20        =   LOOKUP(E20,C54:C59)        checks UK postage rates and enters postage
G20        =   0                          sample entry for SWIFTAIR
H20        =   IF(G20=1,H7,0)             checks for and enters extra SWIFTAIR charge
I20        =   1                          sample entry for REGISTERED LETTER
J20        =   IF(I20=1,H8,0)             checks for and enters extra REGISTERED LETTER charge
K20        =   1                          sample entry for EXPRESS DELIVERY
L20        =   IF(K20=1,H9,0)             checks for and enters extra EXPRESS DELIVERY charge
M20        =   F20+H20+J20+L20            subtotal
N20        =   1                          sample entry for ADVICE OF DELIVERY
O20        =   IF(N20=1,H10,0)            checks for and enters extra ADVICE OF DELIVERY
                                          charge
```

```
P20        =   M20+O20                        total cost

                    [replicate A19:P19 for as many items as required]

A23        =   "European destinations:        subheading
A24 TL     =   "AUSTRIA                       sample destination entry
C24        =   2                              sample item-code entry
E24        =   LOOKUP(C24,B7:B11)             checks and enters weight
F24        =   LOOKUP(E24,E54:E59)            checks European postage rates and enters postage
G24        =   0                              sample entry for SWIFTAIR
H24        =   IF(G24=1,H7,0)                 checks for and enters extra SWIFTAIR charge
I24        =   1                              sample entry for REGISTERED LETTER
J24        =   IF(I24=1,H8,0)                 checks for and enters extra REGISTERED LETTER charge
K24        =   0                              sample entry for EXPRESS DELIVERY
L24        =   IF(K24=1,H9,0)                 checks for and enters extra REGISTERED LETTER charge
M24        =   F24+H24+J24+L24                subtotal
N24        =   1                              sample entry for ADVICE OF DELIVERY
O24        =   IF(N24=1,H10,0)                checks for and enters extra ADVICE OF DELIVERY
                                              charge
P24        =   M24+O24                        total cost

                    [replicate A24:P24 for as many items as required]

A34        =   "Zone A destinations:          subheading
A35 TL     =   "OMAN                          sample destination entry
C35        =   1                              sample item-code entry
E35        =   LOOKUP(C35,B7:B11)             checks and enters weight
F35        =   LOOKUP(E35,G54:G59)            checks Zone A postage rates and enters postage
G35        =   0                              sample entry for SWIFTAIR
H35        =   IF(G35=1,H7,0)                 checks for and enters extra SWIFTAIR charge
I35        =   1                              sample entry for REGISTERED LETTER
J35        =   IF(I35=1,H8,0)                 checks for and enters extra REGISTERED LETTER charge
K35        =   0                              sample entry for EXPRESS DELIVERY
L35        =   IF(K35=1,H9,0)                 checks for and enters extra REGISTERED LETTER charge
M35        =   F35+H35+J35+L35                subtotal
N35        =   1                              sample entry for ADVICE OF DELIVERY
O35        =   IF(N35=1,H10,0)                checks for and enters extra ADVICE OF DELIVERY
                                              charge
P35        =   M35+O35                        total cost

                    [replicate A35:P35 for as many items as required]

A37        =   "Zone B destinations:          subheading
A38 TL     =   "NIGERIA                       sample destination entry
C38        =   1                              sample item-code entry
E38        =   LOOKUP(C38,B7:B11)             checks and enters weight
F38        =   LOOKUP(E38,I54:I59)            checks Zone B postage rates and enters postage
G38        =   1                              sample entry for SWIFTAIR
H38        =   IF(G38=1,H7,0)                 checks for and enters extra SWIFTAIR charge
I38        =   1                              sample entry for REGISTERED LETTER
J38        =   IF(I38=1,H8,0)                 checks for and enters extra REGISTERED LETTER charge
K38        =   0                              sample entry for EXPRESS DELIVERY
L38        =   IF(K38=1,H9,0)                 checks for and enters extra REGISTERED LETTER charge
M38        =   F38+H38+J38+L38                subtotal
N38        =   1                              sample entry for ADVICE OF DELIVERY
O38        =   IF(N38=1,H10,0)                checks for and enters extra ADVICE OF DELIVERY
                                              charge
P38        =   M38+O38                        total cost

                    [replicate A38:P38 for as many items as required]

A40        =   "Zone C destinations:          subheading
A41 TL     =   "AUSTRALIA                     sample destination entry
C41        =   2                              sample item-code entry
E41        =   LOOKUP(C41,B7:B11)             checks and enters weight
F41        =   LOOKUP(E41,K54:K59)            checks Zone C postage rates and enters postage
G41        =   1                              sample entry for SWIFTAIR
H41        =   IF(G41=1,H7,0)                 checks for and enters extra SWIFTAIR charge
```

```
I41       =   1                          sample entry for REGISTERED LETTER
J41       =   IF(I41=1,H8,0)             checks for and enters extra REGISTERED LETTER charge
K41       =   0                          sample entry for EXPRESS DELIVERY
L41       =   IF(K41=1,H9,0)             checks for and enters extra REGISTERED LETTER charge
M41       =   F41+H41+J41+L41            subtotal
N41       =   1                          sample entry for ADVICE OF DELIVERY
O41       =   IF(N41=1,H10,0)            checks for and enters extra ADVICE OF DELIVERY
                                          charge
P41       =   M41+O41                    total cost

                [replicate A41:P41 for as many items as required]

A44 TL    =   '-                         repeated dash for rule
C44       =   "                          ends rule

A45 TL    =   "SUBTOTALS                 row heading text
F45       =   SUM(F20:F44)               sums postage
H45       =   SUM(H20:H44)               sums SWIFTAIR charges
J45       =   SUM(J20:J44)               sums REGISTERED LETTER charges
L45       =   SUM(L20:L44)               sums EXPRESS DELIVERY charges
M45       =   SUM(M20:M44)               sums subtotals
O45       =   SUM(O20:O44)               sums ADVICE OF DELIVERY charges
P45       =   SUM(P20:P44)               sums total cost

B49 TL    =   '=                         repeated equals sign for rule
M49       =   "-                         ends rule
B50       =   "|                         bar for vertical rule
C50       =   "POSTAL RATE TABLES        heading text
M50       =   "|                         bar for vertical rule
B51 TL    =   '-                         repeated dash for rule
M51       =   "-                         ends rule
B52       =   "|                         bar for vertical rule
C52       =   "UK                        column heading text
E52 TL    =   "Europe                    column heading text
G52 TL    =   "Zone A                    column heading text
I52       =   "Zone B                    column heading text
K52       =   "Zone C                    column heading text
M52       =   "|                         bar for vertical rule
B53 TL    =   '-                         repeated dash for rule
M53       =   "-                         ends rule
B54       =   "|                         bar for vertical rule

C54       =   0                          starting weight for UK mail (grams)
D54       =   .18                        postage cost
E54       =   0                          starting weight for Europe
F54       =   .18                        postage cost
G54       =   0                          starting weight for Zone A
H54       =   .29                        postage cost
I54       =   0                          starting weight for Zone B
J54       =   .31                        postage cost
K54       =   0                          starting weight for Zone C
L54       =   .34                        postage cost
M54       =   "|                         bar for vertical rule

B55       =   "|                         bar for vertical rule
C55       =   61                         next weight increment
D55       =   .26                        cost charge
E55       =   21
F55       =   .37
G55       =   11
H55       =   .11
I55       =   11
J55       =   .14
K55       =   11
L55       =   .15
M55       =   "|

                [add similar price increments as required]

B60 TL    =   '-                         repeated dash for rule
M60       =   "-                         ends rule
```

The Mailing Rates Calculator Worksheet

Item	Code	Weight
VHS	1	350
BETAMAX	2	350
U-MATIC	3	920
U-MATIC + VHS/BETA	4	1250
2 x U-MATIC	5	1650

POSTAL PARAMETERS	
SWIFTAIR	1.50
REGISTERED LETTER	1.20
EXPRESS DELIVERY	1.50
ADVICE OF DELIVERY	.21

DESTINATION	Item code	Weight	Postage	Swiftair? [1 for Yes]		Registered? [1 for Yes]		Express? [1 for Yes]		SUBTOTAL	Advise? [1 for Yes]		TOTAL
UK destinations:													
UK	1	350	.72		.00	1	1.20	1	1.50	3.42	1	.21	3.63
UK	1	350	.72		.00	1	1.20	1	1.50	3.42	1	.21	3.63
European destinations:													
AUSTRIA	2	350	1.64		.00	1	1.20		.00	2.84	1	.21	3.05
BELGIUM	2	350	1.64		.00	1	1.20		.00	2.84	1	.21	3.05
BELGIUM	2	350	1.64		.00	1	1.20		.00	2.84	1	.21	3.05
GREECE	1	350	1.64		.00	1	1.20		.00	2.84	1	.21	3.05
SPAIN	4	1250	3.52		.00	1	1.20		.00	4.72	1	.21	4.93
SPAIN	2	350	1.64		.00	1	1.20		.00	2.84	1	.21	3.05
SWEDEN	1	350	1.64		.00	1	1.20		.00	2.84	1	.21	3.05
SWITZERLAND	2	350	1.64		.00	1	1.20		.00	2.84	1	.21	3.05
YUGOSLAVIA	1	350	1.64		.00	1	1.20		.00	2.84	1	.21	3.05
Zone A destinations:													
OMAN	1	350	4.14		.00	1	1.20		.00	5.34	1	.21	5.55
Zone B destinations:													
NIGERIA	1	350	5.21	1	1.50	1	1.20		.00	7.91	1	.21	8.12
Zone C destinations:													
AUSTRALIA	2	350	5.59	1	1.50	1	1.20		.00	8.29	1	.21	8.50
JAPAN	1	350	5.59	1	1.50	1	1.20		.00	8.29	1	.21	8.50
JAPAN	1	350	5.59	1	1.50	1	1.20		.00	8.29	1	.21	8.50
SUBTOTALS			44.20		6.00		19.20		3.00	72.40		3.36	75.76

POSTAL RATE TABLES

UK		Europe		Zone A		Zone B		Zone C	
0	.18	0	.18	0	.29	0	.31	0	.34
61	.26	21	.37	11	.11	11	.14	11	.15
350	.72	350	1.64	350	4.14	350	5.21	350	5.59
920	1.85	920	3.52	920	10.30	920	13.05	920	13.99
921	1.85	921	3.52	921	10.41	921	13.19	921	14.14
1650	3.20	1650	5.17	1650	18.33	1650	23.27	1650	24.94

Readers' Writes

Of disks and SuperCalc

Re. the *Doodles* column in APRICOT FILE Release 1.12, we had three disks supplied with our Xi but have been unable to find any programs with which to create an AUTOEXEC.BAT file such as the article suggests. Did we not receive all the disks we should have? We were speaking to someone who received *five* disks with his Apricot ...

Why is it necessary to purchase boot ROMs and utilities to get programs such as FORMAT, MISCREEN, and PRINTER? Many years ago (well, in 1982, to be exact) when we purchased a Commodore 8032 we received all the disks that were necessary and were not expected to buy boot ROMs and ScannerS disks.

As for the recent SuperCalc workshops, we do not understand why people who write accounts systems keep on saying that this is what their accountant recommended. What accountant has ever said you could base VAT records on a Cash Book? HM Customs & Excise insist on the *records* showing sales and work done in a period, and have never been prepared to accept that Output Tax figures could be arrived at by reference to Cash Received.

We have SuperCalc spreadsheets for the VAT calculations on various retailers' schemes. The main part of these does not analyse the items, but it shows the information necessary for VAT purposes — date, invoice number, code, total, zero-rated goods, standard-rated goods, expenses (in one column) and VAT (zero and standard rate have to be separated to calculate Output Tax for some retailers' schemes).

We also have monthly and weekly wages and salaries on SuperCalc spreadsheets. These can be used for any year without alteration to the replicated calculations, by having two rows and six columns as shown below.

Week or Month 1 is then referenced to the item required and replicated to the last week or month, using the Options command to ensure that each of the replicated formulae relates to the 'reference' row and column.

M Nash
London SW2

You obviously have SuperWriter, since your letter appears to utilise it; and you can use SuperWriter to read and edit or to create AUTOEXEC.BAT files — just save the text in System format. Or use the COPY CON procedure from MS-DOS system level; COPY is not a separate program, it's a command built into MS-DOS.

But you should also have a program called EDLIN on one of your system disks. If it's not there, get back to your dealer and demand it — he may have omitted to supply other things too. Certainly the MISCREEN MicroScreen driver and the PRINTER print spooling utility should be around somewhere on your disks.

FORMAT was originally an Apricot-only internal-use program, though every other computer manufacturer's implementation of MS-DOS gets it. So FORMAT wasn't shipped as standard with Apricots, the idea being that everyone would naturally prefer to use the relevant facilities within MANAGER (which arrives as part of a three-disk system) or ACTIVITY (which comes with five-disk Apricots). But these days FORMAT is widely available on an under-the-counter basis, and Apricot apparently turns a blind eye to users who have got fed up with the time-wasting verbosity of the MANAGER or ACTIVITY procedures.

So it isn't *necessary* to buy any extras at all. You should have everything you need. Extra utilities like those on our DEALS FOR READERS disks and OmrC's ScannerS are potentially handy rather than absolutely vital — they may make your computer easier to use and more versatile, they may not. Incidentally, there *were* some extra utilities available from independent sources for the Commodores; but the 8000 series was a bit of pig to work with, given its limited memory and the way the operating system was embedded inside the thing, and it wasn't all that easy to write the kind of helpful additions that a more open system like MS-DOS will permit.

Advanced Users and Alpha Disk

David Langford (APRICOT FILE Release 1.12) drove me straight to the booksellers with an order for Rodwell's *Advanced User's Guide to the Apricot*. Today I discovered that it doesn't exist — the publisher cancelled publication.

Second, some info on Alpha Disk's 5.25in add-on drive. The device driver has a bug: it may not detect a disk swap. Say you have disk 1 in the add-on drive (C:) and you do a DIR. You find it isn't the one you intended as a recipient for a file in drive B, so you eject it and pout in disk 2. Then you COPY B:FILE C: ... and you end up with a corrputed directory of disk 2.

Alpha Disk is revising the driver. Other sufferers should let the company know they want the revised driver when it appears.

A temporary expedient is to do a DIR B: after changing the disk in the add-on drive; the next access of that drive then has to read the directory info afresh.

Eddie Bromhead
London W13

Well, we checked with Heinneman and were told that Rodwell's book is available. Because we thought other people might be having similar difficulties in getting a copy, we took the opportunity to order a few copies and it now features in the DEALS FOR READERS lists.

	A	B	C	D	E	F
1	FreePay Month 1	3509.48	NI to Oct	.09	Tax rate	.30
2	FreePay Mth 2-12	3659.04	NI to Apr	.09	Tax rate	.30

Brickbats

It was in August 1985 that I purchased an F1, and for several months struggled with the incomprehensible documentation and lack of support from the dealer (I'm sure you recognise the scenario). Eventually my eye caught your advertisement in *Personal Computer World*, and I thought — salvation!

Indeed, a subscription to APRICOT FILE has helped, not least with some of the programs in DEALS FOR READERS supplying things which one would have expected to be included with the system.

However, a close examination of the November issue leaves me feeling unsatisfied with the value-for-money aspect. Ignoring the index section, I calculate that the magazine is made up as follows:

10 pages	articles and review
1 page	small ads
3 pages	advert disguised as review
1.5 pages	page 2 and contributors
4 pages	your own ads

I do not think that 10 pages of information is really good value. As approximately 50 per cent is advertising, perhaps you should consider charging them more and the readers less?

I do appreciate the difficulties of producing this kind of publication, and I don't expect you to produce a defence — I'm just making a comment.

Michael Harrison
Edinburgh

Here's a (partial) defence anyhow, particularly as Mr Harrison's letter arrived in the same post as a personal missive to the editor to the effect that "I think the mix of APRICOT FILE is going wrong ... The proportion of material devoted to selling TP Group and associated products is too conspicuous".

Let's try to cover that one anyhow. Obviously we carry the DEALS FOR READERS pages in each issue. But if there is too much additional promotion for DEALS FOR READERS, it is by no means deliberate — we don't seek to commission articles on DEALS FOR READERS products, and we don't promote them ourselves in in-house writing. Contributed articles that mention stuff from our disks are not massaged to suit our commercial purposes.

Still, we accept Mr Harrison's point about the DEALS FOR READERS pages ... though it's not particularly a profitable operation for us, and we see it more as a kind of *service* (as Mr Harrison's own remarks would seem to support). It's difficult to find a format that will occupy less space and still provide enough information for choice, especially as every month sees brand-new subscribers.

Lindsay Doyle will be most aggrieved that his review of ScannerS is characterised as "advert disguised as review". I would have thought that the comments and criticisms in that piece would suggest otherwise.

It's true that two regular contributers, David Langford and David St.John Wallis, do have small software companies; and we do include products from those companies in the DEALS FOR READERS pages. That's the extent of our relationship, however. We use contributions from both because we feel they have a lot to say to the Apricot community (and we try to censor too much overt self-promotion in their writing). We carry some of their products in DEALS FOR READERS because we regard them as worthy of the APRICOT FILE imprimateur, for what that's worth — and, more to the point, because we feel those products are (a) good and (b) not very widely available to the Apricot user. As such, those products are no different from others we carry — we aren't really in the software retail business, we can afford to be choosey.

Back to Michael Harrison's specific remarks. The index was requested by several readers and it took a lot of work — perhaps too much: but as with the small ads, we felt that it too provided a service to subscribers. If there's a consensus on this, we'll drop both in future — let us know what you want.

In fact, some more feedback would help generally. We don't really here much from subscribers except when we can deal with a query; obviously the onus is on us to offer you information, but it would help both parties if we received more constructive criticism like Mr Harrison's — and, for that matter, more bouquets if they're deserved (we do get a few, like "APRICOT FILE is the best journal of its type and much more *use* than several glossy magazines we get", but we don't much like blowing our own trumpet).

To encourage some kind of retrospective feedback, from this issue we're carrying a regular reader-response panel called the SOAP Box — Fiona came up with that acronym, in the absence of anything better, and it stands for 'Sort Out Articles Preferred'. Use it to indicate what you did and didn't like about this issue of APRICOT FILE. (Yes, Mr Harrison, we know it's yet another non-information page, but the intention is surely a good one? Anyhow, we'll cut its size down in future. And the page-two stuff as well.)

SuperCalc warning

I have two short notes and a query. First, a warning to SuperCalc users: *always* recalculate before saving a spreadsheet to disk if you are using the manual recalculate mode. Otherwise the consequences of any changes will not be saved — and if the spreadsheet is next loaded with the Values option, for insertion into another spreadsheet for instance, those changes will not be included.

Second, it has already been advised in APRICOT FILE to place a filename in cell A1. This is particularly useful if you have a lot of spreadsheets. An added bonus is that when you Output a *contents* report, SuperCalc will include the *displayed* text in A1 giving you the filename as a reference.

Has anyone produced a list of Escape codes for MS-DOS 3.1? I have found that some of those used with 2.11 and BIOS 2.7 do not work.

Alex Blackwell
Co Mayo, Ireland

Even now, handpicked teams of highly-paid experts with multi-coloured biros in their top pockets are beavering away in the wine-cellars beneath APRICOT FILE Towers. We'll print a complete annotated list of Escape codes for all Apricots early in the New Year. ◆

The Workshop

Health Care Revisited:

A generalised backup routine

By Neil Mathers

The 'Health Care at Bandage and Plaster' routines written by Bob Smith (APRICOT FILE Release 1.12) can be developed further to provide a universal batch-file backup. There are a number of drawbacks with the existing routines:

- The routines need to be modified to suit each user's different installation and requirements.
- A separate KDE.BAT file or equivalent must be present in each subdirectory. This is a nuisance to organise, especially if later changes to the structure of the .BAT file are envisaged. (The reason for KDE.BAT file residing in each subdirectory would appear to be the fact that the public domain program KNEW.EXE does not accept subdirectory path names. This can be overcome by locating KNEW.EXE on a RAMdisk set up as drive C.)
- The existing routine backs up *all* files in a given subdirectory. This isn't necessary; and it may be undesirable, since the copying takes additional processing time and quickly fills up a number of microfloppies. Program files can be re-established easily from the original master system or program disks; accordingly we need only back up the various data files — such as Superwriter .DOC and .TXT files, Lotus 1-2-3 .WKS and .PIC files, and dBASE .DBF, .NDX and .MEM files.
- The routine backs up each subdirectory *independently* to a *separate* backup disk. This means related directories and subdirectories may become out of phase, and it also involves more disks than are strictly necessary. To overcome this drawback we can back up various subdirectory files to equivalent subdirectories on the microfloppy; then even files with the same name in different directories can be copied safely on to the same disk.

The solution to the various drawbacks is a general backup routine which is interactive with the various menu .BAT files. GBACKUP.BAT, listed in the panel, is just such a routine.

To use it you need the following programs in the root directory on drive A:

```
FORMAT.EXE      the standard MS-DOS program
KNEW.EXE        public domain program
                [on DEALS FOR READERS disk
                AP002]
TREEDIR.COM     public domain program
                [also on AP002]

GBACKUP.BAT     the backup routine
LISTALL.BAT     a tidy printing routine
LIST.BAT        lists files in date order

MENU.TXT        contains the main screen
                menu
option.BAT      option-choice files
```

The option-choice batch files look like this:

```
ECHO OFF
REM 1.BAT
GBACKUP  param1  param2  param3  param4  param5
         param6 ...
```

(Note that our two-column printing format means that some lines in these batch files have to be broken; don't enter them like this! Batch file commands should all be typed on a single line with no Return until the command line is completed — Ed.) Here the odd-numbered parameters are subdirectory names, or a backslash to reference the root directory; and the even-numbered parameters are file extensions for appropriate data files

This allows you to construct a simple menu calling various batch files to suit your own requirements — typically they'd be called 1.bat, 2.bat, 3.bat and so on to fit the options offered in MENU.TXT.

Sample MENU.TXT

```
            ** BACKUP ROUTINES **

1       Copy  SW and LOTUS data files
2       Copy  SW .DOC .LET .TXT files only
3       Copy  LOTUS .WKS .PIC files only
4       Copy  CLUB records
5         [spare]
6         [spare]
7       List complete Backup disk to printer
8       List only 1986 files to printer
9       Reformat backup disk

                Choice ?
```

A typical OPTION.BAT file

```
REM       1.BAT by Neil Mathers 18-Oct-1986
REM       Remove all REM statements to run
          faster
ECHO OFF
ECHO      ^[x1^[;^[pCopying SW .DOC .LET .TXT
          and LOTUS .WKS .PIC data
          files^[q^[y1^[H^[E
REM       Escape codes here: status line 25,
          reverse video on, label, off,
          cursor home, clear screen
REM       Use GBACKUP.BAT, copying files from
          directories \SW and \LOTUS
GBACKUP   SW DOC SW LET SW TXT LOTUS WKS
          LOTUS PIC
```

To process the variables presented by the calling option file, GBACKUP.BAT incorporates the two batch processing instructions SHIFT and FOR...IN...DO. For example:

```
ECHO OFF
REM         1.BAT
ECHO        Copying SW .DOC, .LET, .TXT and LOTUS
            .WKS and .PIC data files
GBACKUP     SW DOC SW LET SW TXT LOTUS WKS LOTUS
            PIC
```

On the first loop through GBACKUP.BAT, variable %1 is SW and variable %2 is DOC. The subroutine :KNEW is then processed, and works as follows:

- select drive B
- make a subdirectory on B called SW
- change to subdirectory SW on B
- select drive A
- change to subdirectory SW on A
- use KNEW to copy only new .DOC files from A:\SW to B:\SW
- SHIFT variables along and lose 'SW'
- SHIFT again and lose 'DOC'

On the second loop through the subroutine, variable %1 becomes SW and %2 becomes LET. The whole process repeats until there are no more variables — the non-existence of variable %1 is checked by the bogus test IF END%1==END.

At this stage we exit from the subroutine :KNEW and jump to :DONE. TREEDIR.COM will list all files on the microfloppy to the screen; you can press the STOP key to pause the output as it scrolls past (though redirection to the printer with CONTROL-P does not work).

Other features

GBACKUP.BAT also includes options to reinitialise the microfloppy and to list files to the printer.

- Using 'FORMAT' as the first variable in the option file will cause the disk to be reinitialised before files are copied. This is a handy safety measure.
- It's also useful to have a printed list of data files in date/time order; you can review this from time to time to determine which 'old' files may be erased from the hard disk. LIST.BAT was developed for just that purpose — it takes output from TREEDIR, selects and sorts the files for the year 1986 in date order, and lists the results on the printer.

  LIST.BAT can be called directly from a menu. Alternatively it may be chained on to GBACKUP.BAT, in which case the last variable should be 'LIST' to produce the listing automatically.

Last words

The general application is limited by just two factors. First, where a single file exceeds 720K it clearly can't be copied on to a single double-sided microfloppy. In this case the MS-DOS program BACKUP.EXE must be used to put the file on two or more microfloppies. And second, the FOR-IN-DO command does not allow the use of the asterisk and questionmark wildcard characters.

TREEDIR has a couple of quirks, too. Its output cannot be redirected to the printer using CONTROL-P; accordingly I have prepared a separate LISTALL.BAT file which allows listing of the output to the printer. Note also that TREEDIR underestimates by a few percent the disk space taken up by the various files.

LIST.BAT

```
REM   Remove all REM statements to run faster
ECHO OFF
ECHO  ^[z^[x1^[;^[pListing 1986 files in date
      order^[q^[y1^[H
REM   Escape codes here: clear all, status line
      25, reverse video on, label, off, cursor
      home
ECHO  ^[E^[BPlease wait for printer ...
REM   Escape codes here: clear screen, cursor
      down, label
REM   Control codes for printer: margin 6, form
      66, skip over 6, set Elite ...
ECHO  ^[l^F^[CB^[N^F^[M >PRN
REM   Redirect output to printer: send Labels to
      match standard listing of TREEDIR.COM ...
ECHO  TREEDIR — Tree Directory Listing 1986 files
      in date order >PRN
ECHO  >PRN
REM   Adjust space on the following line by trial
      and error to suit column positions ...
ECHO  Filename Date Time Bytes (1024) (1024) >PRN
ECHO  >PRN
ECHO  >PRN
REM   Redirect to printer: use TREEDIR, find 1986
      files, sort in date order ...
TREEDIR B: | FIND "/86" | SORT /+36 >PRN
REM   Set echo off again (TREEDIR upsets
      processing)
ECHO OFF
REM   Control codes for printer: set Pica, Form
      Feed ...
ECHO  ^[P^[L >PRN
REM   Now clear screen and status line 25 ...
ECHO  ^[z
REM   Display main menu again ...
TYPE MENU.TXT
```

LISTALL.BAT

```
REM   Remove all REM statements to run faster
ECHO OFF
ECHO  ^[z^[x1^[;^[pListing all files on Backup
      disk^[q^[y1^[H
REM   Escape codes here: clear all, status line
      25, reverse video on, label, off, cursor
      home
ECHO  ^[E^[BPlease wait for printer ...
REM   Escape codes here: clear screen, cursor
      down, label
REM   Control codes for printer: margin 6, form
      66, skip over 6, set Elite ...
ECHO  ^[l^F^[CB^[N^F^[M >PRN
REM   Redirect to printer: use TREEDIR ...
TREEDIR B: >PRN
REM   Set echo off again (TREEDIR upsets
      processing)
ECHO OFF
REM   Control codes for printer: set Pica, Form
      Feed ...
ECHO  ^[P^[L >PRN
REM   Now clear screen and status line 25 ...
ECHO  ^[z
REM   Display main menu again ...
TYPE MENU.TXT
```

The SHIFT command imposes a limit on the number of variables that may be processed. By trial and error I have found it supports a maximum string of 128 characters; GBACKUP allows for 28 variables, which in practice is more than enough.

GBACKUP uses Escape codes to provide faster processing and a clean user interface. The various uses of escape and control codes may be of interest to readers; they are documented within the BAT files. (Printer control codes are based on the standard Epson RX; they might need to be altered for a printer using different codes.) ◆

The Easy Way

If any readers would like a copy of the routines, send a formatted microfloppy to me at the address below with £1.00 for return postage and expenses.

Neil Mathers
Cedar House
Layters Way
Gerrards Cross
Bucks SL9 7QY

GBACKUP.BAT

```
REM   Remove all REM statements to run faster
ECHO  ^[E^[B^[pGeneral Backup Routine ... Neil
      Mathers^[q
REM   Escape codes here: clear screen, cursor
      down, reverse video on, label, off
REM   Copy KNEW.EXE to RAMdisk C and lose message
      ...
IF NOT EXIST C:KNEW.EXE COPY A:KNEW.EXE C: > NUL
REM   If first variable %1 is not 'FORMAT' jump
      to :KNEW ...
IF NOT %1==FORMAT GOTO KNEW
REM   ... and now reinitialise floppy disk.
      Delete /C to format a blank disk ...
FORMAT B: /C
REM   Now shift and lose the first variable
SHIFT
:KNEW
REM   If last variable is 'LIST' exit to
      'LIST.BAT' ...
IF %1==LIST LIST
REM   Reset drive B to root in case we need to
      make a new directory on drive B ...
B:
CD\
REM   If last variable is missing jump to :DONE
      ...
IF END%1==END GOTO DONE
REM   If copying from root, no need to change;
      jump to :KNEW1 ...
IF %1==\ GOTO KNEW1
REM   Redirect message to MicroScreen - we don't
      want to see it ...
ECHO ^[W
REM   Default drive is B: now make directory as
      first variable %1 ...
MD %1
REM   If directory exists, message 'UNABLE TO
      MAKE DIRECTORY' is given.
REM   Clear MicroScreen quickly, enable and clear
      screen ...
ECHO  ^[E^[v^[E
REM   Now change default directory to first
      variable %1 ...
CD\%1
REM   ... and repeat for drive A ...
A:
CD\%1
:KNEW1
REM   Clear screen in case of jump (root
      directory)
ECHO ^[E
REM   Now to use KNEW.EXE. Change to drive C ...
C:
REM   Send message to screen ...
ECHO  NOW COPYING (%2) FILES TO DIRECTORY (%1) ON
      DRIVE B:
REM   Copy files with second variable as file
      extension from drive A to B
REM   and lose the messages. KNEW copies only
      new/updated files ...
FOR %%P IN (%2) DO KNEW A:*.%%P B: /P /L > NUL
REM   Shift twice along and lose variables %1 %2,
      when %3 %4 become
REM   %1 %2 next time around ...
SHIFT
SHIFT
REM   Reset default directories to root ready to
      quit routine ...
B:
CD\
A:
CD\
GOTO KNEW
:DONE
REM   Reset to drive A, directory to root
A:
CD\
REM   Clear screen, bell, cursor down, reverse
      video on, label, off ...
ECHO  ^[E^G^[B^[pAll complete. To list complete
      directory:^[q
REM   ... and hold it ...
PAUSE
REM   Use TREEDIR to list all subdirectories;
REM   press the STOP key to read the listing on
      screen.
REM   (You cannot redirect to printer using
      CONTROL/P with TREEDIR)
TREEDIR B:
REM   Cursor down to tidy up listing ...
ECHO  ^[B
REM   ... and hold it ...
PAUSE
REM   Now clear screen and status line 25 ...
ECHO  ^[z
REM   Display main menu again ...
TYPE MENU.TXT
```

The Mail-Order Pages

Deals For Readers

Public Domain software, utilities, hardware bargains

This is our mail-order section, exclusively for readers of APRICOT FILE. **In the** DEALS FOR READERS **lists you'll find ...**

- **Public Domain Software**, mostly games and utilities that aren't easy to obtain elsewhere — and many of these are unique to APRICOT FILE
- **deals on Apricot hardware and software**, typically useful items that aren't widely available
- **anything else we think would be of value to readers**, such as relevant books.

Each issue has new entries and (occasionally) price changes. So keep looking! And we're always open to suggestions for additional items — if there's something you'd like to see in DEALS FOR READERS, **or if you've come across a handy utility or a good deal on hardware add-ins, let us know.**

How to order

Simple: just send us a note or a purchase order with the item's name and the reference number as quoted in the list. We will normally be able to process orders within two working days.

Note that for orders totalling less than £50 we can only accept prepayments. There are three ways to pay: a Sterling cheque or money order (made out to "TP GROUP") can accompany your order, or you can use a Girobank transfer — our National Girobank account number is **59 028 1909**.

Or use a credit card. We can accept **Access/Mastercharge**, **American Express** and **Diners Club**; for a charge card payment we need a signed order that includes your name as it appears on the card and your card number.

We can accept purchase orders *only* from companies and other organisations, and *only* if you want goods totalling more than £50. But if it's at all possible we would prefer cash with order — we just aren't big enough to provide the effort of chasing invoices and to cover the shortfall between despatch and delivery.

Sorry, but we cannot accept telephone orders.

The prices quoted include VAT where applicable and despatch. Your order will arrive with a VAT invoice/receipt.

Overseas orders

Orders from outside the British Isles are at the same price. Anything we send abroad is free of the VAT sales tax, and since that 15 per cent levy just about approximates to the extra cost of overseas postage we thought we might as well simplify things.

This may however mean that bulky items or long-distance despatch will go by the postage rate that most closely fits the 15 per cent allowance — and sea mail can be interminable. So if you want to ensure swift despatch, or if there's any doubt, ask us to quote ...

Contribute!

We're always looking for contributions to further £15 disks. So if you've written something — a game, a utility, a helpful batch file — why not share it with other readers? And if the ideas and techniques therein would make a useful mini-article for the newsletter, we'd certainly be interested in printing it.

Public Domain Disks

These disks contain public domain programs and text files which we have sorted, selected and tested. In many cases we have debugged, amended and documented the material too.

Public Domain Library

Order no:	**AP000**
Price:	**£5**

In response to popular demand — all the contents files for all our Public Domain disks for a fiver.

Apricot Disk No. 1

Order no:	**AP001**
Price:	**£15**

Over 40 files. Highlights now include:
AUTOEXEC with an improved prompt
SDIR and FDIR sorted-directory utilities
VDEL and DELQ selective DELetes
WAIT and ASK two batch file commands, more useful than PAUSE
GRAFCHAR define your own characters
ESCAPES list of Escape codes for Sirius and Apricot
OTHELLO good version of the board game
LEADTRAK and ACCTRACK two sales lead management systems.

Apricot Disk No. 2

Order no:	**AP002**
Price:	**£15**

Includes 79 files. Highlights:
ALTER and CHMOD change file attributes
BASICKEYS single-key entry of Basic commands
DEBUG the Apricot version
EPSON sets alternative print modes
KNEW copies only new files
MENU easy batch-file menu system
MOVE moves files from one subdirectory to another
RENDIR rename subdirectories
SORTDISK sorts directories
TREEDIR displays a DIRectory of all files on a disk — in their subdirectories
WHEREIS searches disk subdirectories for named file(s)

Apricot Disk No. 3

Order no:	**AP003**
Price:	**£15**

A bumper bundle. Highlights:
SWEEP all-purpose file housekeeper
SCAVEN finds and locks out bad sectors
MEMDUMP browse through memory
TURBOKEY key redefinition for aficionados of Turbo Pascal
SUPERWRITER XQT FILES a useful clutch of macros

Apricot Disk No. 4

Order no:	**AP007**
Price:	**£15**

More indispensable tools and utilities. Highlights:
ASMGEN dissassembler
132-column screen configurator

Memory speed test benchmarks
Improved version of SETUP
DIARY year-planner
LABEL address label printer
BANNER prints fancy letterheads on daisywheel printer.

Apricot Disk No 5

Order no: AP009
Price: £15

A total of 38 files plus full documentation — includes John Lyth's imaginative MS-DOS menu front end, a suite of dBASE II programs to control your bank account, CHECKER to verify inputting in MSBASIC, DEBUG.PAS, a clutch of Spellbinder utilities, IBMBASIC (BASICA to MSBASIC converter) ... and much, much more!

■■■ NEW ■■■

Apricot Disk No 6

Order no: AP018
Price: £15

Another disk chock full of utilities, 30KB of BATch file extras, essential MS-DOS utilities like DPATH (works like PATH but for data files like overlays and Help text — no more duplicating SuperWriter/SuperCalc OVL and HLP files across subdirectories, for example), the latest versions of SWEEP and WHEREIS, excellent archiving utility ARC, and a handful of programs designed to enhance your data security — even a few programs for inveterate hackers! Our best disk yet?

GSX User's Disk

Order no: AP005
Price: £15

The complete GSX tutorial from Lindsay Doyle — includes a library of ready-to-use Basic subroutines that drive GSX, a set of five printable Workshops in text form, many graphics demo programs, and Lindsay's improved HEXPAWN game IMPHEX. Now with an amended screen driver capable of supporting the Epson FX-80.

Games No. 1

Order no: AP004
Price: £15

Includes the very tough flight simulator 747SIM (fly your own Jumbo) plus old favourites like AWARI, TOWERS OF HANOI, and many more besides. A very full disk.

Games No. 2

Order no: AP006
Price: £15

Includes CLEWDO (solve the mystery), TRUCKER (get a cargo across the States on time), and some games for the younger Apricot user (SPELL and HANGMAN). Plus for the first time a GWBASIC version of STARTREK (noises and all) and BACKGAMMON. Some of these are unsuitable for F Series and Portables.

Games No. 3

Order no: AP008
Price: £15

Only two games on this disk, but both excellent and quite realistic entertainments. GREAT BRITAIN LTD is a political-economic simulation — be Prime Minister, balance the books, win the election if you can. And INHERITANCE is an interesting investment/gambling game; you could get hooked on both!

GWBASIC Games

Order no: AP010
Price: £15

A miscellany of graphics-based games, some old and some new (some borrowed and some blue) — including some special sound effects and graphics demos. Highlights: OPERATOR (try running a large mainframe computer system), hunt for oil with WILDCAT, depress yourself with NUKE-LA and ALIEN.

Chess

Order no: AP016
Price: £15

Only three games — but what games! For the first time on an Apricot, a challenging public domain chess game with superb hi-res graphics — even supports an 8087 if you have one. As an hors d'oeuvre we include a version of PACMAN, for dessert a golf game. A self-booting disk with a free bonus: the latest version of MS-DOS with BIOS 3.1. Now comes with a special chess character set for the Portable and F Series.

The dBASE II Disk

Order no: AP017
Price: £15

Full of dBASE II program suites. Includes programs to control membership records, a dBASE routine library, a label printing program, the ubiquitous mailing list program, a product tracking system, a form letter generator and sundry dBASE utilities. Essentially for keen dBASE programmers.

Programmer's Disk 1

Order no: AP011
Price: £15

Our first disk for programming fans. Star attraction is a public domain implementation of LISP called XLISP, plus fifteen Turbo Pascal routines and utilities, a C cross referencer, an MS BASIC programmers' toolbox, a program line indenter and useful batch file utilities.

Programmer's Disk 2

Order no: AP012
Price: £15

Features BSU, a program to unprotect protected MSBASIC programs; plus Ron Cain's Small C compiler, a trio of cross-referencers for Basic and C, an ASCII-to-Hex converter, a GWBASIC core dumper, the appendix that Microsoft omitted from the MACRO-86 manual, and a C source code checker.

Lotus 1-2-3 Disk No 1

Order no: AP013
Price: £15

No less than 25 WKS templates for 1-2-3, including the Asterix suite of business worksheets, and the macro library MACLIB.WKS.

Lotus 1-2-3 Disk No 2

Order no: AP014
Price: £15

A heap of technical notes and external utilities for 1-2-3 plus seven WKS files including an address label macro and PRNTMENU.WKS to manipulate your Epson printer.

PC File III

Order no: AP015
Price: £15

Our first 'shareware' program — a full and working Apricot version of the well-known general-purpose database/filing package, though with restricted documentation. Menu-driven, great documentation (over 100K of it on the disk), superb power and speed, very easy to use; handles everything from mailing labels to multi-page reports. Exchange data with 1-2-3, MailMerge, many other WP and spreadsheet programs. Indexing on all fields, searches includes 'soundex', multiple selection criteria ... Complete with the latest IBM emulator (which is required). For BIOS 3.1 only.

Special software

These are not public domain items, and they are not discount deals on the kind of software your dealer will sell you. Instead we have gathered a few titles that (a) we feel will be useful to the average Apricot user and (b) you won't find easily — or at all! — anywhere else.

FAST

Order no: AS001
Price: £25

FAST is an accelerator for the Apricot screen: it bypasses certain screen interrupts. Simply running it in an AUTOEXEC.BAT will cause your Apricot to handle screen text up to twice as quickly. FAST doesn't affect CPU clock speeds and so it does not accelerate your graphics or supercharge your program execution times. But its effect on screen performance is pretty impressive.

FAST is very compact, less than 650 bytes; and it's modest price reflects that. For the money you won't find any better way of speeding up an Apricot with a single-line AUTOEXEC command. Not available for Apricots with BIOS 3.1, the F Series, or Portables.

Polyprint

Order no: AS003
Price: £30

Pretty printing from your Apricot on any matrix printer — POLYPRINT lets you produce near-letter-quality printing (almost typesetting quality, in fact) on ordinary dot-matrix printers that are capable of printing graphics (which these days means just about any low-cost matrix printer). Menu-driven, uses only nine keys. Comes with 12 selectable typefaces, some of them very fancy. Accepts ready-to-print output from any word processor; will also work directly from WordStar files without your having to save them on disk first. You must specify which printer you have when ordering — POLYPRINT comes customised for particular printers.

Polyprint Plus

Order no: AS021
Price: £20

For existing POLYPRINT users only: 13 new typefaces and additional facilities including the new capability of mixing typefaces in the middle of a document.

■■■ NEW ■■■

ACOLYTE

Order no: AS035
Price: £45

The latest from Ansible, and an excellent collection as usual. ACOLYTE is a memory-resident keyboard configurator — reconfigure keys on the fly, or assign up to 79 characters of text to a single keypress. Also includes a real-time clock, a printer port switcher, and the printer intercept program APP (customise printer escape codes into something understandable). Plus HARE (Ansible's version of FAST) and TORTOISE (slows down Xens).

A.S.D. 1

Order no: AS006
Price: £57.50

Formerly known as P.A.S.D.: this is the latest (and much improved) version of the first (and only?) independently-produced package of upgrades to and tools for SuperWriter. A packed disk and a good piece of work. Highlights:

- two-column formatting and print
- expansion, improvements, corrections for the dictionary
- full documentation of SW.DEF plus a collection of useful formats
- improved (and more legible) display font
- keyboard configuration presets to speed up keying
- many XQT files to accelerate and simplify your routine work
- several batch files for disk housekeeping.

A.S.D. 2

Order no: AS006
Price: £57.50

A second bumper bundle of SuperWriter goodies from Ansible, essential for SuperWriting but full of generally helpful Apricot extras. Includes DOCTOR (easy-to-use file recovery), MAILER mail-list program, a whole bunch of useful .XQT and BATch files, a disk labeller ... some 90 files in all. Enthusaistically reviewed by Lindsay Doyle in Release 1.11.

■■■ REDUCED ■■■

AnsibleIndex

Order no: AS022
Price: £69

Sophisticated SuperWriter indexing utility, even permits indexing of subjects and themes. Can handle documents chained across more than one disk, too. Only requires two marks per index item.

■■■ PRICE CHANGE ■■■

AnsiblePatch

Order no: AS023
Price: £25

Patches SuperWriter to improve the legibility of displayed text on F series Apricots and Portables.

IANKEY Crash Course

Order no: AS007
Price: £30

The very best keyboard tutor we've seen for newcomers — beats TOUCH 'N' GO into a cocked hat. Sensible design based on serious research; clear on-screen instructions; takes only three or four hours to teach the basics of touch-typing. Our review concluded "I strongly recommend it as excellent value for money" — especially from DEALS FOR READERS, because the normal RRP with VAT and P&P is £58.65.

IANKEY Two-Fingers to Touch-Typing

Order no: AS008
Price: £30

An alternative keyboard tutor — converts a two-fingered 'hunt and peck' typist into a fast user; and it does so without wasting your time, forcing you to relearn the keyboard, or boring you stiff. Included in the enthusiastic review conclusions, and again available from us at a price £10 below RRP.

VICAR

BASIC:	AS026
Price:	£56
TURBO PASCAL:	AS027
Price:	£56
MS PASCAL:	AS028
Price:	£90
dBASE II:	AS029
Price:	£90
dBASE III:	AS030
Price:	£148
C:	AS031
Price:	£148

Variables In Context Analysis and Reporter: another good piece of work from Iansyst — a clutch of neat programmer's aids that began life as a fairly conventional cross-referencer to track the names and usage of variables, but adds the ability to handle multiple source files (handy for applications which can extend across several programs) and importantly shows the complete context for a variable — not just a line number. Note that there are versions for several popular languages.

FORTRAN Utilities

Order no: AS009
Price: £50

A collection of assembler utilities for MS-FORTRAN applications, complete with test programs and link instructions. Now features direct access to system calls and an interfaces to GSX. Also includes:

- set date and time
- current date and time
- get/change default drive
- delete/rename disk file
- read/get character from keyboard buffer
- print characters on printer.

■■■ REDUCED ■■■

SSDISK

Order no: AS024
Price: £11.50

Fed up with the inadequate RAMdisk software that came with your Apricot? S&S has produced a RAMdisk which is configurable up to a full 896KB with 128 directory entries per 'drive'.

■■■ REDUCED ■■■

DO-TO-ALL

Order no: AS010
Price: £11.50

Handy for hard disk users and anyone with multiple subdirectories: DO-TO-ALL lets you issue just one command that is to be applied to all directories — to delete all BAK files in your subdirectories, for instance.

TRANSEND

Order no: AS025
Price: £57.50

A complete comms package for electronic mail, viewdata (eg Prestel), and file transfer. Includes text editor for message preparation, user definable autodial/auto log-on. Supports X-ON/X-OFF and XMODEM protocols. A custom-made cable is available at an extra £25. (Also available in IBM and Sirius formats, again at £57.50 — handy for transferring files to and from those machines.)

■■■ REDUCED ■■■

The File Protect Pack

Order no: AS018
Price: £46

SECRET makes files invisible (or visible again) to DIRectory searches, READONLY sets the attribute bit so that they can't be deleted or overwritten, ENCRYPT encrypts and decrypts files according to your password, ZAP deletes them so

thoroughly they can't be 'undeleted' at all.

■■■ REDUCED ■■■

UNDELETE

Order no: AS020
Price: £17.25

The essential brow-soother — will attempt to recover files that have accidentally been DELeted, and does so with gratifying frequency.

SPLIT Disk Partitioner

Order no: AS033
Price: £56

Infosoft's clever disk partitioning utility for Xi hard disk Apricots — lets you 'partition' the hard disk so that it looks like up to 24 separate disks, each with a drive identifier and each with a size you specify. Thereafter the 'drives' can be treated as if they were real ones for reading, writing, copying, renaming, deleting files etc.

MXDUMP

Order no: AS012
Price: £75

Another classy little number from the programming pen of Friedman — produces exact screen dumps from your Apricot display on a standard Epson MX dot-matrix printer. Once loaded it sits quietly in MS-DOS waiting for you to call it (with a single keystroke). Lots of options: specify text or high-resolution graphics, normal or bold, standard- or double-width: and more ...

■■■ REDUCED ■■■

The Lotus Pack

Order no: AS013
Price: £46

Useful utilities from S&S Enterprises for Lotus users:

- ☐ THEPOUND lets you use all the displayable Apricot characters in worksheets — including the pound sign
- ☐ SOLID123 consolidates several 1-2-3 or Symphony worksheets into a total
- ☐ TRANSPOS transposes rows and columns
- ☐ 123RANGE lists worksheet ranges.

■■■ PRICED TO CLEAR ■■■

QUEST — The Adventure

Order no: AS034
Price: £10

A few copies only of this interesting semi-graphic adventure game, bought as bankrupt stock and discovered taking up valuable shelf space in the back office. Good fun — runs on any Apricot, though Portables and F series must have BIOS 3.1.

■■■ REDUCED ■■■

The Printer Pack

Order no: AS015
Price: £34.50

Mainly for Epson-compatibles, mainly for spreadsheets:

- ☐ SIDELINE prints worksheets sideways so that wide spreadsheets fit on to the paper
- ☐ FXPOUND prints the pound sign on FX-type printers
- ☐ SETFXPR provides a set-up menu for printer functions.

■■■ REDUCED ■■■

The WP Pack

Order no: AS016
Price: £46

Four handy S&S utilities for word processing:

- ☐ WSASCII converts WordStar files to ASCII format so that they can be read by other word processors
- ☐ WORDNO word counter
- ☐ READAGE calculates the reading age (ie the comprehensibility) of text
- ☐ SEARCH searches text for a given phrase.

■■■ REDUCED ■■■

The First-Aid Kit

Order no: AS017
Price: £23

Just what you need to make your computer more palatable to novice uses — the DOSMENU front-end option-choice menu and the HELP dial-an-explanation facility.

The Games Box

Order no: AS019
Price: £25

Two games from Alan Solomon: ADVENTURE is the original 'Colossal Cave', CASH CRISIS is 'Space Invaders' with money

■■■ NEW ■■■

A La Carte

Order no: AS032
Price: £340

An exclusive offer to APRICOT FILE readers at £100 off the recommended price: A La Carte is a superior windows-based 'executive desktop' system which has a database management system, word processing and diary. In her review in Personal Computer World magazine, Kathy Lang called it "neat and easy to understand ... full of thoughtful and unusual features". All this and you can also use A La Carte to 'front-end' other software. To be reviewed in APRICOT FILE too. Requires a minimum of 512KB, works best on a hard disk. Not for Portables or F Series.

Other extras

Good Computing Book

Order no: AB001
Price: £3.00

A tubby and packed paperback for beginners. Mostly a reference dictionary of computing terms, but also lots of introductory info. Claims to offer "everything you need to know and nothing you don't".

■■■ NEW ■■■

Advanced User's Guide to the Apricot

Order no: AB002
Price: £15

After David Langford's generally enthusiastic review of this paperback by Peter Rodwell, we've had a number of requests to stock it. Full of hard-to-get technical information (and a couple of items of misinformation — "still, it's better than a poke in the eye with an Apricot plc manual" said David) like memory maps, BIOS constants, escape sequences, a good brief discussion of networking, etc. Our price is for UK orders only — for overseas orders add £2.00 to cover the exorbitant cost of postage.

Expansion Memory

256KB	AH004
	£130
512KB	AH005
	£185

High-quality add-in memory cards from a well-known manufacturer at prices we think you'll find hard to beat — bearing in mind that they include VAT and despatch. The 512K board is particularly good value, perfect for RAM disks and big SuperCalc worksheets.

All prices include VAT and despatch. Send your order with payment to:

APRICOT FILE
TP Group
PO Box 509
London N1 1YL
England

Queries: 01-833 3501

Cheques should be made payable to TP GROUP.

We aim to despatch within 48 hours, but please allow 21 days for delivery before calling to complain ...

Note that we must have *prepayment* except for official purchase orders; and *purchase orders* can only be accepted for orders totalling £50 or more.

We can accept payment in Sterling by **cheque, Eurocheque,** or **postal order**): by **Girobank transfer** — our National Girobank account number is **59 028 1909**: or by **credit card** — we take Access/Mastercharge, American Express and Diners Club.

Classified

Free Small Ads

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.

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

■■■ 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)

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

■■■ 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.

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

■■■ 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.

■■■ 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

■■■ 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).

■■■ 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.

Wants

■■■ 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 264 (office hours) or 02519 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. ◆

Review

How compatible is 'compatible'?

The Apricot Xen-i reviewed

By Alan Solomon

The Sirius was a lovely machine, years ahead of its time. But ACT decided that it could make more profit by designing and manufacturing its own machine; so the Sirius was dropped, and the Apricot was launched.

The Apricot was a beautiful machine, faster and in many ways better than the IBM PC. It was soon joined by the Xi hard-disk version, and then Apricot brought out its network. The F1, F2 and F10 soon came along, as standalones or as network workstations: the F1E was launched as a low-end entry machine, primarily for education: and the Portable appeared because portability was fashionable. Apricot could then boast of a complete range of machines, from the humble F1E to the mighty Point 32 Network.

The first crack in this edifice appeared when the Portable was remaindered. No-one wanted an unreadable screen, a single disk drive and a scrabble keyboard for something approaching £2,000; so Apricot dropped the thing and Dixons flogged most of the stock at £500 apiece.

But this writing on the wall was lost in the brouhaha of the Xen launch — faster than a speeding bullet (well, faster than an IBM PC/AT). Shortly afterwards, Apricot told the owners of the F Series machines that they were now possessed a family of orphans, no longer to be sold or supported by Apricot dealers. Users of the Apricot PC and Xi felt relieved that the same fate hadn't befallen them ... except that shortly afterwards it did.

Xen clothes, IBM insides

Then Apricot brought out the IBM-compatible Xen-i. Anyone buying the older Apricot-compatible Xen (call it the Xen-a for short) must now be feeling a bit worried about what Apricot is going to do about that machine, and we know of a few people who now wish they'd known a bit more before they got their Xen.

This new Xen-i is important, not only in its own right, but also because its fate will determine the fate of the Xen-a — and the fate of Apricot plc too. So we got hold of one, we took the cover off, and we took it to pieces.

The questions we tried to answer are these:

- How exactly does this Xen consist of, and what can it be upgraded to?
- How IBM-compatible is it? Will it take IBM-type add-on cards? Hard disks? Other hardware? Will it run IBM software?
- Most important of all, since it probably affects Apricot's survival, will the corporate users buy it?

So this is not a review of the Xen-i as a computer *per se*; it's an examination of the Xen-i as an IBM-compatible machine.

Basics

The first impression is good. Apricot has always made beautiful machines, and the Xen-i is no exception. In particular, the system unit box is svelte: only four inches high.

Apricot achieved this partly by leaving out the power supply — it's in a separate footwarmer. This is not a problem in itself, but the other space-saver in the Xen design will cause a major problem for Apricot later — the number of internal expansion slots is strictly limited.

One reason for buying a PC/AT or an AT clone is the larger number of full-size expansion slots you get by comparison with the standard IBM PC. The PC and its clones have five full-length slots; the XT and its clones have eight (of which two are half-length) and they are also closer together. But the AT has eight full-length expansion slots, spaced well apart.

This is an oversimplification, of course, for some of those slots must be occupied before you have a useable machine. On a hard-disk AT, for instance, there will be four slots filled — hard disk controller, floppy disk controller, video card and multifunction card. This leaves four long slots for future use, and that is one of the major advantages of the AT over the PC. Some clones do even better by putting several of the necessary functions on the motherboard; the Walters AT, for example, has five free slots.

This is one of the major failings of the Xen-i; it has only three empty expansion slots, and those slots are nearly useless. To put a card into a slot, you have to dismantle the card cage first — and then you can only put in a half-size card.

One of the future expansions you are quite likely to want is an EGA card and monitor, to give access to the superior colour graphics and text provided by the 'Enhanced Graphics Adapter' specification. We wanted to check whether an EGA card and monitor would work, so we put in one of the ubiquitous half-size EGA cards. The card was half an inch too long; there was no way it would fit in any of the three slots. The Xen will only take cards that are six inches or less. The slots should be called one-third-size, not half-size.

There are no short slots on an IBM PC/AT, or on any of the clones. So there's no incentive for card manufacturers to make their cards that vital half-inch shorter. Indeed, the trend is to cram as

many functions as possible on one card; a card that does two jobs is cheaper than two cards.

The Xen can take *Apricot* expansion cards, if a PX adaptor is fitted. It isn't obvious why anyone would want to use Apricot expansion cards, but some people might — especially the 'internal' modem. Apricot supplied a PX adaptor and a modem, and both worked.

Further inside

While we had the box open we took a good look around inside. There are three long pieces of wire patching the motherboard, and four resistors soldered directly to the legs of chips — which suggests (to put it politely) that the design of the motherboard has not yet been finalised.

We also saw a pair of prongs labelled 'MIC'. On the front of the Xen there's an LED marked 'Voice' — could it be that Apricot still think that people want to speak commands to their computers? The voice system on the Portable was a joke; perhaps someone at Apricot has improved it ...

There were some good things inside the box, though. There's a socket for an 80287 floating-point co-processor, and there was an opening in the case where the main bus lines had a socket — this is for the expansion box. (We tried to get an expansion box so that we could test the EGA upgrade externally. We tried, and tried and tried .... In the end, we gave up. Apricot said that there are none available for review — which means either that they're being sold as fast as Apricot can make them, or that Apricot hasn't made any yet.)

There was a similar opening for the lines to the hard disk controller and the floppy disk controller, so it should be possible to add more hard disk storage and another floppy drive externally.

But there is no way to add internal hard or floppy drives — or tape streamers, or anything else. There is no mounting bay provided. To add such things you'll need one of the elusive expansion boxes.

Mouse droppings

The Xen comes with a mouse. Anyone who has experienced the Apricot 'mouse' may skip to the next section. The first problem was caused by the fact that Apricot provided the mouse-driving software on a 3.5in disk, and the Xen-i has a 5.25in drive. It was only after we'd used KERMIT to transfer the software to a 5.25in disk that we thought to look on the hard disk — and sure enough, the relevant files were all there. If only the documentation had mentioned that ...

The Xen-i also comes with WINDOWS and GEM. We started up WINDOWS by pressing one of the soft keys, and tried to use the mouse. Many readers will already know what happened next. We had to choose between four situations:

- Moving the mouse up and down works fine; but if you move it left, the cursor goes right — and *vice versa.*
- Use the mouse the other way up. The left and right movements now work as expected; but moving it up makes the cursor go down, and *vice versa.*
- Turn the mouse upside-down and use it as a trackerball. At least everything works the right way round; but a mouse is much preferable. The ball is rather loose anyway, and it would take some practice to adjust my mousing instincts to balling (as it were).
- Don't use the mouse at all. This means that WINDOWS and GEM are unusable, and we have to resort to naked MS-DOS. At least we have been spared the horror of ACTIVITY.

Software compatibility

The Xen-i is somewhat IBM-compatible at the software level. For example, Lotus 1-2-3 version 2 worked every time. So did dBase III Plus. But Framework version 1.0 didn't run ; the problem was the copy protection. We found that Symphony would load about half the time, and on the other occasions the copy protection check failed. This looks like it is going to be a slight problem with the Xen — the reason is the faster clock speed of its processor, for most copy-protection mechanisms on popular software are geared to the PC/AT's 8MHz.

One of the hardware add-ons that Apricot is currently promoting heavily is XENTEL. This is a program that runs under WINDOWS to control your telephone — or rather, the Xen's telephone.

The keyboard of the Xen looks as if it has a corner cut off; this is to accommodate a BABT-approved telephone attachment with a shape that fits into the missing corner. This has its own keypad, and you can dial numbers on it just like using an ordinary phone.

The other part of the XENTEL hardware is a modem. You can connect the telephone jack into a two-way adaptor together with the telephone jack of the modem, and you plug the whole thing into your telephone point.

To install the modem you open up the system box, dismantle the card cage, and fit a PX adaptor. This then accepts a standard Apricot modem. You connect it to a wire on the motherboard, which hooks up the Xen loudspeaker so that you can hear the progress of the telephone call. The modem plus PX adaptor uses up two of the three expansion slots on the Xen.

The modem isn't documented at all, so you have to use the supplied XENTEL software. You must put the statement DEVICE = ATMODEM.SYS into the CONFIG.SYS file to interface between XENTEL and the Apricot modem; we were told that this

translates Hayes AT commands into Apricot modem commands, and effectively makes the modem Hayes-compatible.

If this is true it should be documented, for that ought to make it possible to use XENTEL with a non-Apricot modem. For example, you could use an external modem, which would save all the hassle of fitting an internal one and leave all the Xen's expansion slots free. Something like a Miracle Technology WS4000 modem would be cheaper, and offer more features.

Having installed the modem to Apricot's orders, we tried using XENTEL. The main purpose of the software is to act as a rapid telephone directory (with some database functions) and autodialler. Well, the program works: but it is really too fiddly, and probably won't actually get very much use. The mouse (or rather, the trackerball) has to be moved around and clicked quite a lot to make things happen — though when you do finally call a number, you *do* get through.

XENTEL is not a terminal emulator, either. If you want to log in to a remote computer, you have to use a separate WINDOWS program called TERMINAL. This uses a different communications port, though, so it would need its own modem.

Our favourite IBM autodialler is Borland's SideKick and we tried that on the Xen. SideKick needs a Hayes modem, so we wanted to see if it could work with the ATMODEM.SYS emulator. It didn't, and it's not at all clear why. Because of the lack of documentation, it was not possible to find out to which comms port the modem was attached or what Hayes features were or were not emulated. Nor could we work out how to use PROCOMM, a public domain communications program that also assumes a Hayes-compatible modem.

Last words

So, will the Xen-i sell? Probably it will. It's a good, fast, stylish machine in its own right. In raw terms, its performance is better than most 80286 machines on the market at present. Universities and local and central government will buy it because the thing is British (well, as British as any computer using bought-in components can be these days). Smaller businesses will buy it because Apricot is a name that they know, whereas Amstrad is more associated with game computers and High Street retailers.

The mass market for the Xen-i must however be major corporations. Bigger businesses may buy the Xen-i on performance and compatibility, but they'll expect a discount on the slightly uncompetitive list prices — and they will certainly require some reassurance on the expandability issue and the question of compatibility, especially with IBM mainframe and networking products.

Ultimately the success of the Xen-i — and of Apricot plc — is bound up with Apricot's new emphasis on 'systems' marketing. If the Xen-i can typically be sold as part of a much larger value-added system — with Xenix or a network for multi-user applications, say — Apricot may be able to avoid the box-shifting price wars that are already dragging down the price of AT-level performance. Apricot wants to see the Xen-i as its flagship in penetrating a market currently dominated by 'minicomputer' manufacturers. And it all comes down to the efforts that its top 50 dealers can put into promoting the Xen-i as a viable alternative to multi-user minis as well as to the IBM PC/AT and the (much cheaper) AT clones. ◆

Apricot Xen-i

Description:	High-performance desktop computer
Supplier:	Apricot via dealers
Telephone:	021-456 1234
Price:	from £1,999 — see panel
Conclusion:	Fast, smart, but limited in expandability and compatibility.

The Xen-i range

■■■ Xen-Xi 10 and 20

Launched earlier this year, the Xen-Xi 10 is a 10MB 286-based machine presented as "a fully upgradeable entry point to the Xen systems line". It claims full IBM-compatibility and "the option of the world's first double-density 3.5in disks". The RRP is £1,999, which includes £149 worth of green-phosphor monitor. The XEN-Xi 20 is a 20MB version at £2,499.

Both look identical to existing Xens, but they run the 80286 processor at 8MHz instead of 10MHz: they have 512KB memory and offer a choice of AT-type 1.2MB 5.25in disks or IBM-compatible 1.44MB 3.5in double-density microfloppies: and they don't include the external expansion slots or 'above memory' standard on the Xen-i models.

■■■ Xen-i HD and XD

The 'original' Xen-i models were launched in June. The HD has 1MB memory, a 1.2MB 5.25in floppy, and a 20MB hard disk; the box costs £2,849 and you'll need a screen — £149 for the green monchrome monitor, a £299 'paper-white' display, or one of the colour monitors with extra-cost adapter cards.

The Xen-i XD has 2MB RAM and a faster-access 50MB hard disk. The system unit is £3,849.

Doodles by David

Tips and tricks

from the working day

By David St.John Wallis

This has been a month of horrors and extraordinary battles with the forces of evil in the depths of darkest Surrey. The first thing that happened was a minute and barely detectible flickering around the edges of the spreadsheet screen. Then a few odd read and write errors ...

Could it be the power supply unit, one questioned. One thought one would run the great Norton Utilities DT program: oh horrors, errors nearly everywhere. One backed up everything in sight using CLIP and ran the dangerous Apricot test program TES002. Yes, Norton was right.

A few phone calls later and the system unit lay on a table in the *Fox & Pelican*, naked for all the world to see. Was it just the power supply, or were there more problems? Answer came there one: "You, squire, have a duff hard disk and a worse psu".

Gadzooks, I hear you empathise. But one day, 300 miles and several hundred pounds later, both bits were replaced — not cheap, but worth it. And it had to happen some time. The moral in this story: computers break down after a bit. *So back them up.*

Mein Kampf

So we got a review of ScannerS One in APRICOT FILE last month. Oh, the humilation, the shame! The reviewer spotted *every one* of the control errors.

The wonderful thing about a review is, though, that it doesn't seem to matter how awful it is — people will keep buying the thing reviewed. So maybe it shouldn't be Mein Kampf with Herr Doyle; maybe meine Bewunderung for him instead. We're rewriting the .DOC files for the fourteenth time and version 15 of the program will have walnut panelling and anti-lock brakes as standard. ScannerS Two is going to have back up utilities and a telephone dialler, and hopefully some memory resident clever bits now that at last we have the BIOS memory map.

Inflation

A chap told me the other day that it is not true that people all over the world are forming syndicates to buy APRICOT FILE at the new prices. It's a sophisticated, (yes, I do know what sophisticated means), clever, not to mention invaluable guide to the various arcanæ of Apricotese. Isn't it? This chap said it was, and not only because the entire TP Group were threatening him with huge boxes of back issues.

But (independent opinion coming up here) what I would like to see are more reviews, more on program pricing, more magazine altogether — and less repeats of small ads. *(See the Readers' Writes pages for more on this — Ed.)*

In Re: the translation of SuperCalc

SuperCalc has a language all its own. I found this out when trying to get identical spreadsheets to run on Logistix, Smart, Open Access and Symphony. Not a task to be taken lightly.

To cut it short: it's not worth translating SuperCalc into Smart, because the last version of Smart for the Apricot has bugs and is not supported by Innovative Software — a great pity, though it *will* use cell references like R21:1876C43:C60.

Don't bother with Logistix either. This is supported by Grafox, but you have to work at it. The program is so bug-ridden that after trying it for just a few minutes you wind up screaming. And if you *like* integrated packages, you might try Open Access: I gave up on this one.

So by default, it was Symphony which got my custom. Why change at all, I hear you mutter? Well SuperCalc is very good: but it is also very small and very, very slow. Try making up a big spreadsheet with a few conditionals using circular references, and then recalculate: with SuperCalc you'll find that while the program's at it you've got time to read the naughty bits in *Le Peau du Chagrin*, mow the lawns for miles around, and take a few days off in Clacton.

A spreadsheet which is big and which supports the 8087 is veritably a joy to behold and bliss to use. And to translate from SuperCalc to Lotus formats is a cinch: Symphony has a DIF accept mode. The only things it *doesn't* do are make sense of date arithmetic, so you have to put these in manually.

Weltschmirtz revisited

As a small but significant follow-up to last month's story about angst und weltschmirtz over the demise of my hard disk, it took the Cornhill Insurance Group just 22 days to settle the bill. In full, without inspection or question. And I didn't claim under the 'derangement' clause. An error of judgement?

Brains and balls

What a consolation: not only does this column now have one more reader, but he solved the 12 balls problem — Vivian Parkins, a rare and splendid man. In case you're interested, there are three vertical solutions and one lateral one. I know one of each (gloat). For each additional correct solution, another fiver goes into the church roof fund.

Christmas cracker

I am indebted to Andy Smith, whom God hath bless'd of Epsom, for providing the following: if you type "ECHO" then CONTROL-L followed by ">PRN", you get a form feed. Nice if your printer is miles away and you can't quite work up the energy to lift up the acoustic hood.

A new COMMAND.COM

Well, quite new. Apparently ported over from a Sirius, it includes a HIstory command that let's you see what the last lot of commands you typed to MS-DOS were. Then you can go back and edit any of them. It's about 3KB longer than usual and seems to work well with 2.7 and 3.1 RAM BIOSes. It also shows you your CONFIG.SYS setup. And you can name disks with it! Applications in a brown paper envelope will be dealt with in order of the quality of the centrefold inside.

This is part of its output — which is a right give-away on my own usage of MS-DOS:

```
30.  ACAD
29.  RENDIR APPS PROGRAMS
28.  DIR
27.  DS N
26.  FONT STRETCH
25.  COPY CON A.BAT
24.  CACHE
23.  LIB
22.  MAGIC A.BAT
21.  NPROMPT
20.  VDEL *.XQT
19.  SDIR
18.  TYPE A.BAT
17.  C:
16.  COPY CON A.BAT
15.  LS
14.  DEL A.BAT
13.  SI
12.  E:
11.  COPY CON A.BAT
10.  SCAN COMMAND.COM /L9
9.   A:
8.   SET WP=/B-10
7.   WP/R
6.   COPY CON AUTOEXEC.BAT
5.   COPY AUTOEXEC.BAT \
4.   QUOF
3.   HI>NOW
2.   HIDE AUTOEXEC.BAT
1.   QUIK
```

Now you can go 'HI 8' followed by ESC and U and edit that line to change the WordPerfect auto backup interval to, say, 15. Not much use if you are as primitive as I am with MS-DOS — but suppose you use very long winded commands at the DOS level and find out too late you made a mistake. With this you can go back and correct any.

Rumour

It's said that MS-DOS 3.2 is quicker than 3.1. More about this next year. It is absolutely true though that MS-DOS 2.11 RAMBIOS 3.1 is slower than RAMBIOS 2.7. A whole day was spent investigating this using the new mistyped benchmarks from *Personal Computer World*. If you want speed, stay with 2.7 (incidentally, those benchmarks run quite a bit faster with MicroCache enabled).

Titbit

Did you know you can update the system on a disk without destroying the data? The syntax can be something like ...

```
FORMAT B: /Ua.
```

In case the wonderful desktop publisher doesn't clearly indicate the proportions, put a space between the colon and the slash. This works with hard disks too. If you hide files to get a nice clean root directory though, be sure to unhide those which are normally visible — like COMMAND.COM.

Duff floppies

A chap called the other day full of woe about his F1 which was getting a bit thoughtful about reading and writing to disk. Apparently, he had bought some disks which shed huge quantities of oxide all over his drive heads. On cleaning them very carefully with Johnson's Baby Buds he must have misaligned one or both of them. So he had to get a new floppy drive.

The only really good news to come out of this is that [A] recognised brands *are* better; and [B] the price of replacement floppy drives has dropped quite a lot from around £300 with labour to £200 or less.

Memory

Just as I had decided to dispense with my 512KB ramcard and go for the 960KB motherboard upgrade, someone told me that Apricots in the States can have 2MB of RAM. Does anyone know anything about this?

Festive footnote

Felicitaçiones to you all, *vaya con Dios*, keep away from the keyboard after your fourth double malt, have a nice day etc. With all the best wishes for the Festive Whatnot and Prosperous New Thingy. Never forget the very great words of some French chap: "Your (news)letter is before me in the smallest room in the house. Presently, it will be behind me".

And finally, what is the odd number in this sequence?

2	17	43	61	14	17	574	1	17

Answer: 61 — chicken chow mein with two types vegetable. All the others are beef dishes.

News of the Apricot World

Spreadsheets — yes and no

In the quest for a spreadsheet bigger and faster than SuperCalc, one of our readers has discovered that none of the latest releases of **Symphony**, **Lotus 1-2-3**, **Smart**, **MultiPlan** or **SuperCalc** itself will be made available for Apricots. The *good* news is that **Psion** and **SPI** will continue to support Apricot owners. In particular, SPI has a new version of **Open Access** in the pipeline (due in January); we hear the spreadsheet module will be available separately if required. "There are still a lot of Apricots out there" said SPI's **Paul May**.

DataEase eases on up

Sapphire Systems appears to have a real winner in its **DataEase** database package. Seven months after the software's release, market researchers Context make DataEase the market leader with just over 23 per cent of the database package market by volume. That's nearly five per cent ahead of its nearest competitor, the much-promoted dBASE III.

ICEman cometh

The receiver is in at **Independent Computer Engineering**, one of the longest-established British manufacturers of add-on hard disks and streamers. At least the maintenance group **DDT** has acquired all of ICE's computer-related assets and says it will continue support for ICE products.

Compec report

The British manufacturer **Christie Electronics** has for some time been the best-rated supplier of tape backup devices on the IBM PC. At Compec last month, though, a corner of Christie's stand was showing a neat tape streamer for the Apricot and Xen; for **£795**, **Reel One** stores 20MB.

It gets its modest size (about 5in wide, 3in high, 15in long) and its claims of very high reliability by the use of Interdyne tape reels. These tape spools are around 2in in diameter, as opposed to the bulkier 3M-type tape cartridges more usually found in backup units; cartridges, according to Interdyne, are larger and more complicated than they need to be — which results in a physically bigger drive unit and an increased chance of mechanical failures. The Interdyne 'microreel' is a self-threading self-tensioning tape — you just put it on to the spindle and close the drive door — and there are no capstans or pinch wheels to screw up the tape itself.

What's more, Reel One needs no controller card in the host machine. The Apricot version, one of several, is connected via the RS232 port and driven by software supplied; we were told that next year should see an upgraded self-controlled unit.

We've asked for a review unit, and assuming a favourable report we'll add the product to our DEALS FOR READERS lists if there's any interest from readers. As it stands, Reel One looked solid, easy to use, and *very* small. Christie is on **04536 79821**, retail enquiries should go to its **Digital Peripherals** subsidiary on **04536 71387**.

Incidentally, those are also the numbers if you want to buy **Alpha Disc** add-on drives — the XF700 (adds one Apricot-format 3.5in drive), the XF-400 (use a 5.25in 40-track IBM disk with your Apricot) and the XF-800 (IBM formats, switchable between 40 and 80 tracks — we reviewed this one favourably in APRICOT FILE Release 1.8). Christie now has exclusive UK marketing rights to these units.

Another Apricot-relevant product that caught the eye at Compec was **Multilink**, a simple and modestly-priced local area network from Cambridge-based **Nine Tiles Computer Systems**. Twisted-pair cabling connects workstations; you need a connector box for each device, and if it's a computer you also need an interface card. Boxes are **£250** each (£300 if you take the 'intelligent' version), interfaces are available for a very wide range of computers — the Apricot card is **£275**. You can have up to 125 devices on the network, which moves data at 250K baud and uses packet transmissions rather than the cruder Ethernet-style collision detection.

At those prices, Multilink compares quite well with the simplest RS232 networks where only one participating computer at a time can have read/write status. Multilink will also be a lot faster. In short, it all looks solid and simple. Nine Tiles is on **0223 862125**.

Elsewhere we came across **Digital Deli** with a four-colour printer/plotter at **£149.95**. The **Comx PL80** takes paper reels or single A4 sheets (it can also print on to overhead transparencies), uses four ballpoint-type pens, connects via a Centronics interface, and performs pretty well for its price — resolution is 0.2mm, maximum plotting speed is 92mm a second, text printing is at 10cps. The normal text style is Pica, but you can plug in ROM cartridges for other character styles (including foreign languages). We saw it working happily with AutoCAD, which isn't a bad test. Digital Deli is on **01-359 2536**.

Red Faces Department

Regular readers may have been fascinated to read our appreciation of MS-DOS 3.1 in APRICOT FILE Release 2.1 — particularly the comments on the APPEND command. Skip that bit; APPEND is provided with MS-NET and is in some versions of MS-DOS 3, but *not* with the standard DOS 3 being shipped by Apricot. We must have had a rogue and/or Beta test disk. Apologies all round. That's the bad news; the *good* news is that our latest public domain disk — AP006, price £15 — includes a much better utility called DPATH which does the same thing (and more).

Hold the line

According to a report in the *Financial Times*, British Telecom has worked out the cost of waiting for the switchboard to put you through to the person you've called — as a percentage of BT's total revenue from call times, the figure is £800 million. Britain's 10 million office workers apparently spend a week a year just holding on, so adding that proportion of their salaries takes the total loss to over a billion pounds. Sounds like a good justification for electronic mail ...

Yuletide cheer

This being our second Christmas with APRICOT FILE, we'd like to wish all subscribers the best of seasonal greetings and good wishes for a bountiful, bug-free 1977 with no BIOS bedevilments and frequent backups.

The SoapBox

Your opportunity to rate APRICOT FILE

Tell us what you do and don't like about APRICOT FILE. The SoapBox is your chance to rate the contents of this issue; and that will help us to put together a better newsletter for you. 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.

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The SoapBox	☐	☐	☐	☐	☐	

What would you like to see in future issues?

Seasonal Jollity

