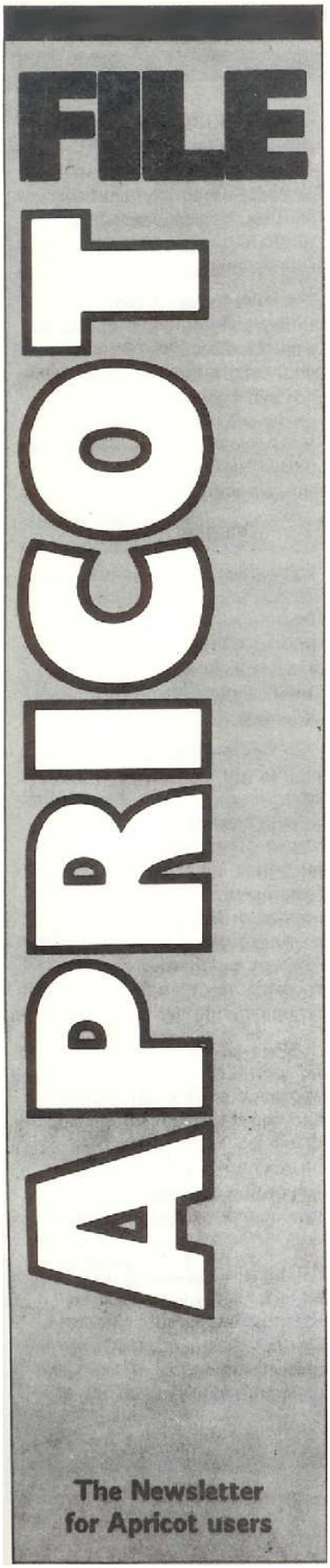
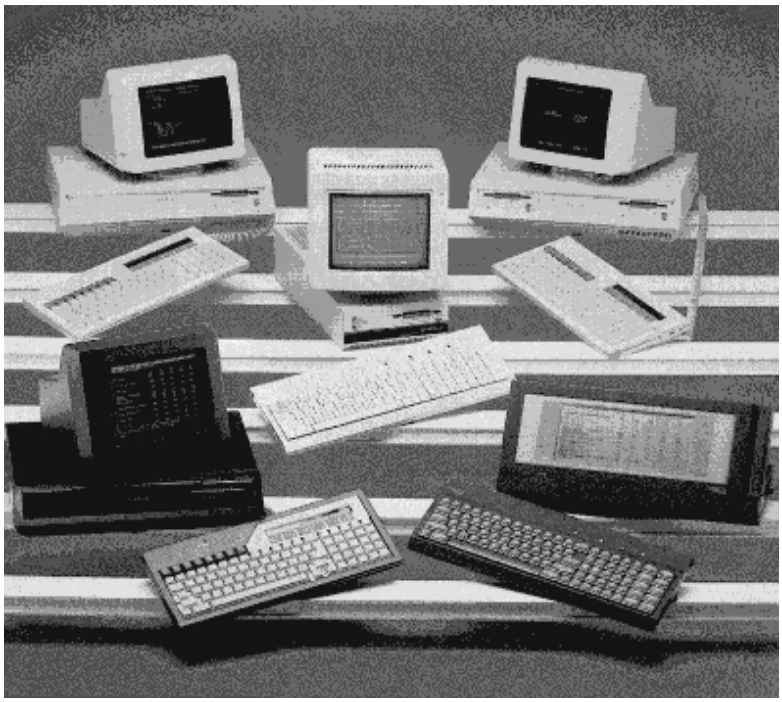


Apricot File 1_1



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Release 1.1

October 1985

FILE APRICOT

The Newsletter for Apricot users

The newest Apricot

by Henry Deckhand

The latest Apricot was launched with the customary pizzazz last week; as expected, the Apricot Xen is a powerful but compact machine that utilitises the Intel 80826 microprocessor chip.

The Xen is a slimline system unit containing the electronics, disk drives (two 720KB Sony microfloppies, or one Sony and a 20MB Winchester), expansion slots (six of them, though you lose one for the display), and 512KB memory (up to 5MB maximum). There are two I/O ports, Centronics parallel and RS232 serial.

The keyboard is a combination of Apricot and IBM — 102 keys, including no less than 17 function keys. The layout isn't quite IBM, though the keytop legends will be familiar. It retains the MicroScreen, but replaces the awful flat membrane function keys with real ones.

You pay extra for a screen, and there's a choice of four. The cheapest is the same green-on-black 12in diagonal display sold for the Apricots. There's a black-on-white monitor which looks good for word processing; and there are two colour displays, one 'medium-resolution' (which means low-resolution) and one 'high-resolution' (meaning IBM's definition of 'high').

The software provided is MS-DOS 3.1 (much the same as 2.11 but with a few more functions and — importantly — the ability to cope with networking) plus Microsoft Windows, GW-BASIC, and an async comms package. The Windows bit includes some 'deskop accessories' of a fairly trivial but potentially useful nature: calculator, card-file, clock, calendar, a VT100 terminal emulator, and an iffy version of the game Reversi (just what the tired executive needs at the end of a long day).

Promised next year is Xenix. Logica is collaborating on a Xen implementation of the multi-user operating system, which is probably good news. Up to 16 users are claimed, with "seven or eight" being more typical (and four being more likely).

The main box is quite a neat unit, thanks to low-profile disks and a single main PCB. Some more space has been saved by leaving out the power supply unit, the step-down transformer which all computers need to convert mains voltage into something the electronics can handle. In the present Apricots, the power supply is in the box — that's why they have a fan, for the power supply gets hot; and that's why they weigh so much, because the power supply is necessarily beefy. The Xen's is particularly beefy; it sits on the floor rather like a sullen black pig-iron shoebox. No portable, this.

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Write for us!

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If you have something you'd like to say, contact the Editor first to talk about it. Thereafter articles can be submitted in two ways — transmitted via electronic mail (Micromail/Telecom Gold, The Source, or MCI Mail): or in word processor format on disk (we can handle most WP formats, but it's safest to send an accompanying hardcopy too).

Material for publication should be accompanied where appropriate by a self-addressed and correctly stamped envelope or mailer. We'll do our best, but otherwise we cannot be responsible for the return of unsolicited manuscripts, disks, etc.

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ISSN 0268-6066

Group Test

Comms packages for the Apricot

by **David Hewson**

You've seen the ads, you've read the book, you may even have seen the film. No excuses — by now you must know that we're in the communications era. Computer shall talk to computer ... provided both have the right software, and provided the software runs correctly.

The world of computer communications is filled with fascination and frustration. Get it right and you've added an astonishing tool to your machine. Get it wrong and you will discover that comms, more than any other computer discipline, can prompt your colleagues and loved ones to send for the men in white coats.

Buying comms packages

There are three important areas to be considered when buying comms software: will it work with your modem? Can it handle error-checking protocols, to guarantee the accuracy of transmission? And will it save lots of the work of signing on to another computer or a dial-up service by providing automatic log-on procedures?

The **modem** issue is particularly fraught for some Apricot owners. The modem board from ACT/Apricot Limited fits neatly in a slot inside the machine: needs no separate power supply, is invisible to the naked eye, provides 1200 baud communications at 300 baud or at 1200/75 (this split speed — 1200 baud for receiving data, 75 for transmitting — has become something of a standard in the UK and more generally in Europe, since it's used by Prestel and other viewdata systems) ... it's a perfect wonder. Or rather, it ought to be.

The truth is that the modem is a perfect nightmare. Few pieces of independent software run with it, and Apricot's own comms programs leave much to be desired. If you who want to stick with the internal modem, COMM+ might be the answer.

But if you have yet to buy a modem, look at something external — it's probably cheaper and there is a much wider range of software available for anything which does not have the ACT/Apricot sign upon it.

There is a wide choice of external modems now available, and prices are dropping. Look for 1200 baud modems; baud rate is a measure of transmission speed, more or less equivalent to 'bits per second', so the faster you can go the cheaper it will be on your phone bill. 1200 baud is currently the best compromise in Britain — faster modems are *much* more expensive, and the ordinary dial-up phone dials can't send data reliably at any more than 2400 baud. But make sure your preferred software will drive a 1200 baud modem: some (notably the Apricot products) won't.

Error-checking is important if you have large amounts of text to despatch or you want to pull down programs from the kind of electronic 'bulletin boards' run by many user groups (none of them are Apricot groups, but many of the programs 'published' in this way by IBM PC user groups will run on our machines).

Many pieces of software now boast their own error-checking procedures, a nice idea but usually hopeless unless you are communicating with a terminal which uses the same program.

The one to look out for (because it's the most widely used — at present) is called Xmodem, though even that varies slightly: the only answer if you're in any doubt is to persuade a dealer to set up a test run to the computer you want to use and see if the thing works. I have had no problems with the Xmodem routines on those programs reviewed here which have them.

Incidentally, you might come across 'X-On/X-Off' — a phrase much bandied about in the comms world. This is not an error correction protocol at all, it's a flow control system which decides when something's been sent or received; still, that doesn't stop Apricot's IMASYNCX boasting "no errors" detected after it sends something. Don't believe it.

Automatic log-on may sound like a small thing, but it's important. It saves you having to type "NTLGOLD901TYM A219201004 ID NUT001 JABBERWOCKY" every time you sign on to Telecom Gold, for which you should be truly grateful.

Crosstalk XVI and COMM+, which come out best of this survey, also offer handy routines for automating the whole of an electronic mail exercise. This could enable you to leave your machine on and have it remotely pick up or despatch your mail at off-peak times if required.

IMASYNCX: Apricot UK Ltd

IMASYNCX costs £50 plus VAT from Apricot. It's an update to ASYNC, the file transfer software which used to come free with each Apricot.

This is the cheapest offering from Apricot in the comms field. Personally, I don't feel £50 is particularly cheap at all; but in any case many dealers seem to since a great many deny all knowledge of the program's existence at all and try to flog Apricot's Communiqué in its place for nearly three times the price. (I only found out about it by phoning Apricot direct after months of frustration at being unable to make the internal modem dial any other number than Telecom Gold.)

The layout of the program will be familiar to anyone who has used ASYNC, though it all looks a lot simpler and carries fewer variations — how about that for an update?

The bizarre thing about IMASYNCX is the way it forces you to press 34 keystrokes when three or so ought to do. Take the the phone directory; this is a separate, linking program, which can be accessed from within the main one but not changed from it. To use the directory, you must first call up the file with the relevant parameters, then shift to another menu and ask for the phone numbers. You're subsequently required to type the first letter of the number you want: and then you must flick through everything before it alphabetically before selecting it, going to another menu, knocking the cursor down four places and hitting return to auto-dial!

It's easier to type the thing in yourself each time, of course, which is what I inevitably ended up doing.

Alternatively, you can set up a task file which you initiate by typing something like "IMASYNCX FRED" at the A> prompt. The trouble is that this does not refer to the phone directory, so if your number changes you must make two tedious sets of alterations.

Even worse, the auto log-on procedure is a farce. Between each password you have to place precisely the right number of PAUSE instructions to delay the sending of the magic word. Get it wrong and something is almost certain to drop the line. The auto log-on procedure is, in effect, unusable.

IMASYNCX in summary

Capabilities	300 baud only (though 1200 is promised); and can really only work live, with you typing in every line as required
Documentation	with my copy it was just a text file on the program disk: but the whole thing is so rudimentary you hardly need any more
Modem	Apricot internal modem only
Error-checking	none
Ease of use	good
Help functions	none

Does IMASYNCX have anything to recommend it? Oddly enough, yes. It is so basic that if your needs are simple and you have hardly any time to learn how to use a comms program you will be able to make this thing work. If it was given away free with the modem then I'd think it was quite reasonable.

IMASYNCX

Description:	300 baud communications for Apricot with internal modem only
UK supplier:	Apricot Ltd via dealers
Address:	Shenstone House Dudley Road Halesowen West Midlands B63 3NT
Telephone:	021-501 2284
Price:	£50
Configuration:	any Apricot with internal modem
Conclusion	IMASYNCX can make the internal modem dial and speak to a remote number. Absence of real automatic log-on facilities and anything in the way of error-checking make it one strictly for the amateurs; but it is fine for accessing bulletin boards (though without Xmodem you'll have problems downloading software). Value for money? Doubtful

Micromail: Apricot UK Ltd

This is Apricot's program to access Telecom Gold. It includes Telecom Gold registration, a nominal £50 value (though it's easy enough to find some way of getting that for free elsewhere; and of course you still have to pay Telecom Gold usage fees as well as your phone bill). But I can't think of a good reason for buying a separate Telecom Gold program when you can perfectly well use a general-purpose comms program to access the network — and plenty more.

Micromail made its debut with the internal modem last year and it is now showing its age. The parameters option says everything there is to know about the software. You can store two numbers only, one for dialing direct to Telecom Gold and one for accessing it through the PSS network. The correct phone numbers for each service are inserted along with your ID and password, you opt for the internal modem (if you've got it), and everything is now set.

The program self-boots from its own systems disk; and, after an assembly of on-screen junk gibbering on about Pulsar security procedures, you get into a menu offering options to run other software or go into Micromail itself.

Two further key strokes take you into a message offering to dial the one of two numbers. The

software automatically logs you on to Telecom Gold, and the Microscreen can be used both to send and receive material along the phone line.

MICROMAIL

Description:	300 and 1200/75 baud links to Telecom Gold for Apricot with internal or external modem. Includes free Telecom Gold registration
UK supplier:	Apricot UK Ltd via dealers
Address:	Shenstone House Dudley Road Halesowen West Midlands B63 3NT
Telephone:	021-501 2284
Price:	£95
Configuration:	any Apricot with internal or external modem
Conclusion:	Micromail had a place when it was the only Apricot comms software on the market, but now it seems somewhat pointless — it achieves nothing which could not be gained from a good general comms program capable of much more. Poor value for money, since the use is so limited

The whole thing is tremendously easy to use and takes up only a few pages in the manual, the rest of which is devoted to a detailed and very helpful explanation of how to get the best out of Telecom Gold. There is a simple 'auto' command which can be used to access a series of often-used instructions stored on disk: but, like everything else with Micromail, it is nothing spectacular.

MICROMAIL in summary

Capabilities	can use 300 and 1200/75 baud, but only for accessing two Telecom Gold numbers. If you want to try another Telecom Gold number for some reason, you will have to go back into the parameters section to alter one of the selections. Can't be used as a general-purpose comms package
Documentation	doesn't have a lot to say about Micromail itself, but it is a very handy guide to Telecom Gold — much better than Telecom Gold's own in fact
Modem	the internal modem is the best option, but Micromail may also be used with external modems without auto-dial
Error-checking	none
Ease of use	good
Help functions	rudimentary

COMMUNIQUE: Apricot UK Ltd

Communiqué is a communications program from Apricot UK Ltd that is basically IMASYNCX with the added facility of '1275' viewdata access.

Anyone who has to send a great deal of text over the phone lines knows that 300 baud is dreadfully slow and tends to result in monstrous quarterly bills: hence the Prestel viewdata standard, which goes halfway towards a faster transmission standard — it means you can receive at 1200 but only send at 75, which can be a mixed blessing.

Communiqué is meant to bring the speed of 1200/75 lines principally to those wishing to access large databases such as Datastream, Dun & Bradstreet, and Pergamon InfoLine. At £70 an hour plus phone charges for some of these things, I can only wish them luck.

To be frank, Communiqué is a bit of a swizz. The software is little more than a souped up version of Micromail with a larger number of potential directory entries and the ability to use 1275 in addition to 300 baud.

The only real additions are a Viewdata 'page manager' and a slightly fancier command structure for simplifying repeated keystrokes. The Viewdata page manager is described in the skimpy Communiqué manual (no index or page numbers) in one of the most impenetrable pieces of prose I have ever encountered; and the software itself isn't much better. What it boils down to is a way of storing and indexing to disk pages taken from a Viewdata service.

Communiqué in summary

Capabilities	300 and (unlike IMASYNCX) 1200/75 baud services with auto log-on plus the ability (unlike Micromail) to insert your own phone numbers and parameters
Documentation	exceedingly thin
Modem	internal modem only
Error-checking	none
Ease of use	acceptable
Help functions	barely useful

Communiqué also includes ready-to-go access to a number of dial-up information services. Among them are Prestel, ACT's own payroll processing bureau, and a number of commercial company information and news services. These all cost extra, and you have to deal direct with the database supplier to get a subscription to them; so all that Communiqué provides is ready-entered auto-dial and auto-log-on facilities.

COMMUNIQUE

Description:	300 and 1200/75 baud communications for Apricot with internal modem only
UK supplier:	Apricot UK Ltd via dealers
Address:	Shenstone House Dudley Road Halesowen West Midlands B63 3NT
Telephone:	021-501 2284
Price:	£395 with modem, £145 without — plus optional £75 per year for database updates (and subscription charges for using any of the dial-up services to which it can provide access)
Configuration:	any Apricot with internal modem
Conclusion:	Communiqué is essentially a way of introducing the user to 1200/75 database usage. But it does not offer a cheap way in — the only freebie is registration with Telecom Gold and that is on offer with scores of comms packages now. Like all the Apricot comms products it also has a glaring omission in its inability to read a disk directory from within the program. Not recommended.

CROSSTALK XVI: Microstuf

Crosstalk is the market leader for this kind of comms package in the States; and nothing better demonstrates the lead which the US has on us in the comms field — it is far and away the best comms program I have seen on the Apricot and must set the standard for the field.

In fact, the opening of Crosstalk is not terribly well thought out. Essentially you switch between an active communicating field and a background one which sets the operating data by using the Home and ESCape switches. It is not an obvious way to do things; but you can reprogram to put the functions elsewhere if you wish, and anyhow it becomes easy to use after a few minutes.

The great joy of working like this is the ease with which you can change the parameters of the task in hand *while you're still in the program* (an enormous boon for someone like me who frequently makes calls on spec and forgets to switch baud rate). Some programs insist that you have to drop the call to change the parameters. With Crosstalk the switching is so quick that it hardly matters if you have got your details right in the first place.

I wish though that the thing had been arranged so that you could flick through the equivalent of a phone directory. Instead you are presented with a series of files to be accessed — each of which can be arranged to contain the relevant parameters and auto log-on details. It's an aesthetic quibble, maybe, but a quibble all the same.

Crosstalk is a program that demands constant use of the manual (which is one way of stopping the pirates) and that is only partly because it has such a huge range of features. Some of them seem a little obscure, such as the 'snapshot' function which allows the user to capture data into a buffer and edit it in memory while you're still in the program, but that is probably because this isn't the sort of thing I want to use.

Crosstalk XVI in summary

Capabilities	300 or 1200 baud. But Crosstalk is unable to handle the 1200/75 split baud rate, an omission which makes it unsuitable for the Prestel user.
Documentation	has an American bias, naturally, but is comprehensive and well-explained. This was the only manual that told me everything I needed to know without having to make a call to the dealer
Modem	the auto-dialling seems to be guaranteed only with US-standard Hayes-compatible modems, but we should have a good many of those around shortly. Leaving auto- dialling aside, Crosstalk will work with most modems (and was fine with the acoustic coupler from my Epson PX8 too)
Error-checking	uses Xmodem — which is not guaranteed to work but caused

	me no problems — and its own system too (which is reputed to be much more accurate). Given the number of copies sold in the US, the internal non-standard error-checking protocol might actually be useful
Ease of use	some manual-reading required, but it's all there. Very easy to use the auto log-on facilities and write program scripts
Help functions	first class. Every command is documented concisely and accurately. This does not mean you can throw the manual away, but at least you don't have to refer to it for minor matters

Crosstalk XVI

Description:	300 and 1200 baud communications for Apricot with external modem
UK suppliers:	Access Software 36 Aybrook Street London W1M 3JL Davison-Richards Systems House 29 Charnwood Street Derby DE1 2GU
Price:	£145 (Access) £165 (Davison-Richards)
Configuration:	Apricot with external modem
Conclusion:	The best of this batch of comms programs — but only if you don't need split baud rates. And you may find it hard to buy a compatible external modem if you want auto-dialling. But excellent value for money

And a tremendous amount of thought has gone into the program. That's typified by the clock which runs in the bottom righthand corner of the screen as a permanent reminder of how long you have been on-line — the first phone bill a comms newcomer receives will prove just how useful *that* is! There is also the facility to emulate the DEC VT-100, Televideo 910/920, IBM 3101 ASCII and ADDS terminals; could be useful if you're connecting to a mainframe computer.

COMM+: Margolis & Co

COMM+ is the only non-Apricot package in this bunch to run with the Apricot's internal modem — though it also drives conventional external modems too.

The originator of COMM+ has been highly critical of the internal modem in public (well, in the computer industry press). In particular he has castigated the manufacturer's refusal to issue details of its innards to outside software designers.

This hasn't stopped him working out a routine which picks up Apricot's own internal modem driver and links it into the general COMM+ package. The thing still runs more slowly than it would with an outside modem, but not so that I would notice: and it does indisputably drive Apricot's hardware efficiently.

The package comes with a colossal manual and two supplements, a foretaste of its power and complexity. Regrettably, it takes more than a little time to come to grips with both the software and the documentation.

COMM+ in summary

Capabilities	300 and 1200/75 baud operation. The internal language can handle auto log-on, customized screens and preprogrammed tasks such as recovering new mail from an electronic mail service
Documentation	comprehensive but badly organised. The main manual is divided illogically and takes some time to understand. Everything you require is probably there somewhere; but it's written for the expert, not the novice
Modem	can use the internal modem, and can auto-dial on it. Also works with a variety of external modems (which are faster)
Ease of use	requires some considerable time and effort to get the most from the package's facilities. Unnecessary number of keystrokes required for common functions, too
Error-checking	has its own plus and two Xmodem protocols, one of which supports batch transfers
Help functions	slow and short on detail

COMM+ works in two modes — online and offline. Neither is particularly obvious; and I can't help feeling that people who use ESC as a control key coupled with an F to mean 'send' must have been brought up on WordStar.

And there are a good number of unnecessary keystrokes. For instance, before you send a file you must first name it, then choose between sending it to the screen, the printer or transmitting. It seems a lot of messing about, but I suppose it is handy to be able to review text on screen before despatching it out into the ether.

But if you persevere, it is all there. COMM+ also has a built-in text editor and even a typewriter mode which can be used for writing direct to a printer (no, I don't know why that should be in a comms package — but it's handy for writing envelopes).

The real strength of COMM+ can be found in the supplementary manuals. One is dedicated to the COMM+ language and JCFs — 'Job Control Files'. The language, which bears a striking similarity to dBASE II, enables the user to set up a wide variety of customised comms functions. You could, for instance, write various interlinked JCF files to change the somewhat impenetrable public face of COMM+ into a customised screen complete with your own phone directory and menu driven functions which ought to enable the novice user to run the system with ease.

COMM+	
Description:	300 or 1200 baud communications for Apricot with internal or external modem
UK supplier:	Margolis & Co
Address:	105 Foundling Court Brunswick Centre London WC1
Telephone:	01-278 3032
Price:	£ 185.00
Configuration:	Apricot with internal or external modem
Conclusion:	COMM+ is the result of a great deal of thought and hard work; it could be turned into the best piece of comms software reviewed here. But if your requirements are simple, and you do not want to spend days sweating over a manual, look elsewhere. Otherwise it's good value for money — *if* you have the time to get the most out of the software

A sample program designed for use with Easylink convinced me that COMM+ can be turned into something which surpasses anything else I've seen around. But I would bear in mind that writing such a system yourself will not be a job for the boys; and given the complexity of the program and its comparative newness, I wouldn't expect much in the way of backup from a software dealer.

Crosstalk apart, COMM+ is the best comms package I've seen. Indeed, had I a few months to spare to unravel all its secrets I might rate it higher.

CHITCHAT: SAGE SOFTWARE

ChitChat is another British package. It costs £130, though now it's usually recommended as a package with a modem for £399 (which I've seen discounted to around the £300 mark).

This must be one of the most heavily advertised comms programs around. And here your humble correspondent must admit to a degree of bias. ChitChat was promoted as a stand-alone piece of comms software last January and sounded wonderful. Yes, I was told by Sage's head office in Newcastle, it did work with the internal modem; and yes, it would be ready any moment. Like a mug I ceased my search for a real comms program and placed an order.

Three months later the thing arrived. And it didn't want to know the internal modem.

After a rather tedious opening procedure during which you must offer the disk a full name and address (will this *really* stop pirating?) the system asks the Apricot user to press function key F2 to obtain a telephone directory. Nothing on the Microscreen, but I though I'd give it a try. Not a thing.

A good hour later I realised why. It doesn't tell you so in the manual, but ChitChat uses the eight grey keys on the top left of the Apricot keyboard — those marked Help to Finish; those are the first eight function keys. Then it dashes over to the right to make the first two Microscreen keys count as F9 and F10. Why the whole thing was not put on the Microscreen with shifted values for the extra functions must remain a mystery, and it is not the first the ChitChat user will encounter.

Eventually I got to the phone directory: and very nice it looked too, a list of preprogrammed numbers from Telecom Gold and variations through to Distel, each with the phone number beside it and the required baud rate. If you have the Sage auto-dial modem, you can dial a number

just by moving the cursor to the relevant name and pressing F4 — yes, the one marked CALC — and you're away. Hallelujah. For all its faults, ChitChat at least allows us to work with something that seems familiar, i.e. a phone book, and for that I am truly grateful.

Trouble is, the whole thing moves at a deathly rate, and frequently feels as if it is written in paleolithic Basic.

Along the bottom of the screen sit ten representations of the function keys, covering the main functions of sending and receiving files. (You can actually get a disk directory from within the program, too, but it takes a little while to get there.)

Sending and receiving files is relatively easy, and there's a basic text editor within the software — if you need it, and I can't imagine most people will.

ChitChat

Description:	300 or 1200 baud communications for Apricot with internal or external modem
UK supplier:	SageSoft
Address:	NEI House Regent Centre Gosforth Newcastle Upon Tyne NE3 3DS
Telephone:	091 284 7077
Price	£130
Configuration	Apricot with external modem
Conclusion	ChitChat feels as though it was released before it was finished. It is cumbersome to use and does not attempt to make the most of the Apricot. But the auto log-on works; and there is a small programming language which can handle automatic tasks from log-on, through text capture, to log-off. If it worked as a standalone piece of software the price would be pretty reasonable; but the whole package at £399 seems expensive

ChitChat in summary

Capabilities	300 or 1200 or 1200/75 baud — no restrictions on speed, covers split baud rates and can handle local computer-to-computer file transfer too. Auto log-on system well and is easy to understand; and you can 'create a task', in other words pre-program a comms routine to go into Telecom Gold, or whatever, and pull out any new mail without even being there
Documentation	excellent as far as it goes. The ChitChat manual is very good on what it chooses to tell you, and it is written in an easy-to-understand manner. But there are huge gaps in explanation, notably over the use of the function keys
Modem	external modems only. Most users now tend to purchase it with the associated modem
Error-checking	has its own version of Xmodem
Ease of use	relatively simple once you overcome a few omissions in the manual
Help functions	the Help function key is laughable, usually producing one paragraph which tells you to refer to the manual

To be fair, others have seen ChitChat working on different machines and come away quite impressed, so perhaps I'm still a little underwhelmed by the Sinclair-style tactics of its manufacturers. But I wish the money spent on promotion had been put into making the actual product better — it is very nearly something worthwhile; but, in my book, it doesn't quite make it.

Coming soon — cheap comms?

While I will give way to no man in defending my own Apricot PC against the hordes of Big Blue and the PC-compatibles, I am forced to admit that in the field of communications the IBM clan (by which, of course, I mean the software houses) are setting standards which we cannot yet emulate.

There are good reasons for this. Comms have been allowed to develop freely in America; and the result is that the land abounds with cheap, advanced modems and bulletin boards packed with

any number of public domain comms software programs.

Here, we have British Telecom. That means two things — a lengthy approval process for anyone wanting to market a new modem: and antiquated exchange switching equipment which can't handle some of the tones generated by American equipment.

That's the reason why all modems which can run on the American Bell system (and there are plenty on sale in Britain) are absolutely illegal. British Telecom claims they could actually block exchange switching gear.

So we *should* now be using 1200 full duplex modems at reasonable prices with auto-dial, auto-answer, and other sophisticated features. But the reality is that until very recently the only modems available under the £300 mark tended be ones which run at 300 baud (which is *slow*) and/or Prestel's split baud rates (1200 receive, 75 send).

I dont want to sound too depressing. Things will look up, if only because they have to. Already there is a crop of home-grown 1200 baud modems from small, independent companies; and the doyen of US modem-makers, Hayes, is reportedly about to launch a Europeanised version of its best-selling Smartmodem over here.

In many ways, comms is at the formative stage the micro business itself experienced four or five years ago. Prices are high but falling, the idea is starting to seep into the consciousness of the general user, and new hardware is coming onto the market at regular intervals.

Sadly, there are probably technical reasons why we'll never catch up with the US; and most of them are to do with British Telecom. By the time it's finally installed the 'new' System X exchange hardware will be hopelessly out of date, for example.

But I live with the reasonable expectation that in two years' time a sophisticated 1200/1200 modem and software should be available for most machines for an all-in price under £200. And I'm not normally accused of being over-optimistic. ◆

The APRICOT FILE review programme includes a number of communications-related features. In forthcoming issues you can expect to read reviews of ...

- **electronic mail services**
- **low-cost modems**
- **acoustic couplers**
- **more comms software**
- **computer-to-computer file transfer packages**

Writers in this issue

Dennis Jarrett is Editor of the newsletter. He was formerly the editor of 16 BIT COMPUTING, and his magazine credits before that include being founder-editor of OLIVETTI USER, COMMODORE USER, OFFICE AUTOMATION REPORT, PRACTICAL COMPUTING, and WHICH COMPUTER?

Roger Gann works full-time running the DEALS FOR READERS section of the newsletter as well as contributing words, ideas, humour, hints, legal advice, spittle for mass-mailings, etc.

Friedman Wagner-Dobler is a writer (of words and software) and an independent consultant. As well as contributing substantially to the newsletters he is responsible for getting them into printable form — for which he uses a laser printer and NEWSWRITER, a word processor he wrote himself.

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

Lindsay Doyle escaped from the dungeons of MICROCOMPUTER PRINTOUT in the confusion following that magazine's demise, and had contributed just one piece to 16 BIT COMPUTING before that magazine also crashed. But we don't hold that against him: he now resides in a specially-furnished cell deep beneath the editorial offices of APRICOT FILE, and there he is motivated by the promise of occasional bread and water to generate a series of articles about using the Apricot PC and Xi.

Randall McMullan is a writer, lecturer and consultant who has been using computers for 20 years. His recent books include WORDSTAR PROMPT and the rather good SUPERCALC PROMPT.

Paul Humphreys is currently Accounts and Purchasing Manager for Chelsea Instruments; he has been involved with computers for three years now, contributing articles on their use to a number of magazines (including 16 BIT COMPUTING) during that time.

David Hewson is the showbiz correspondent of A Major National Newspaper. He uses an Apricot primarily for work at home, and also dabbles with other machines, including Epson portables. He is an enthusiastic but easily depressed bulletin board browser.

Deals for Readers

One of the most popular features in 16 BIT COMPUTING was the Deals For Readers section. We regard this as a valuable service to subscribers, and we intend to continue it — and to develop it substantially.

In the DEALS FOR READERS lists you'll find ...

- **public domain software,** mostly games and utilities that aren't easy to obtain elsewhere, particularly not in Apricot format. We get these items from user groups and bulletin boards, convert from the near-universal IBM PC format in which they start life, make sure they work on the Apricot, add some documentation if that's needed, and assemble them on to fully-loaded disks (there's usually between 20 and 50 files per disk)
- **software that you won't find easily elsewhere,** typically items on which we've fixed up exclusive UK rights or the kind of utilities that software houses produce for their own use but which aren't priced high enough to merit a conventional full-scale sales campaign
- **demo disks** for packages that we regard as pretty good. This enables you to try before you buy — you can get hold of the demo and run it at your own convenience *without* a salesperson peering over your shoulder and *without* your name going into some software house's promotional mailing list

How to order

Send us a note 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 and only in Sterling, so a cheque or money order (made out to "TP GROUP") *must* accompany your order.

We will accept purchase orders 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.

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

At the moment we can't afford to take credit card orders — the card companies (a) charge retailers for that and (b) can be slow in paying up. If things work out for us, though, we will fix that up.

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.

And that also applies to bugs. No-one can expect this stuff to have the same rigorous checking-out that you should expect from commercial packages. We do check the material on the public domain disks, but we can't do that exhaustively — so let us know if you come across any bugs. And let us have a copy of any fixes you can make ...

We'll trade free copies of existing public domain disks for substantial contributions. At the moment we're looking particularly for items like macros, templates, XQT files, tutorials to put on disks for:

- **SuperWriter**
- **SuperCalc**
- **Spellbinder**
- **Turbo Pascal**
- **WordStar**
- **Lotus 1-2-3**
- **MS-Basic**

Public Domain Disks

These disks contain programs and text files culled from a variety of sources — some converted from other formats (mostly IBM PC and Victor) and checked out or revised for the Apricot: some taken from published programs: some written by contributors. As a result the disks are a bit of a miscellany, but we'd be very surprised if you couldn't find a dozen or more useful items on each.

Apricot Disk No. 1	
Order no:	**AP001**
Price:	**£15**

Virtually the same as the 16 BIT COMPUTING A001 disk, with over 40 files aboard it. We've amended some of them and replaced a couple. Highlights now include:

AUTOEXEC an improved prompt that tells you the date, time and current directory on the current drive
SDIR and **FDIR** two handy sorted-directory utilities. SDIR in particular will mean you never have to use the ordinary DIR again ..
WASH multi-purpose file housekeeping utility. Lists each file on a disk, lets you decide what you want to do about it
VDEL and **DELQ** two selective DELete commands
SYSTAT reports disk usage and free space remaining. Clearer and quicker than CHKDSK

WAIT and ASK two batch file commands, both more useful than PAUSE
STRIP converts WordStar document files into a format readable by any other WP package
WC counter for characters, words and lines in a text file
GRAFCHAR a kind of EFONT in Basic for defining your own characters
ESCAPES a text file containing the complete ESCape code for Sirius/Victor and Apricot
DUNGEON improved version of the Adventure-style game
OTHELLO a good implementation of the well-known board game
LEADTRAK and ACCTRACK two sales lead systems

Apricot Disk No. 2

Order no:	**AP002**
Price:	**£15**

As the 16 BIT COMPUTING disk no. A002 — 79 files. Highlights include:

ALTER and CHMOD allow you to change file attributes
BASICKEYS configures keyboard for single-key entry of Basic commands
CRF Basic cross-referencer
DEBUG the complete Apricot MS-DOS 2.11 version
EPSON handy utility for setting alternative print modes on Epsons and compatibles
INDEX-84 complete index to 16 BIT COMPUTING's 1984 issues
KNEW backup utility that copies only new files
LOWER and UPPER change case of text files
MENU demo of simple batch-file menu system
MOVE moves files from one subdirectory to another
PLOT slow but impressive dem of MS-DOS plotting and Apricot's screen resolution
RENDIR lets you rename subdirectories
SORTDISK lets you sort directories in a variety of ways — invaluable if you have a lot of files on a disk
TREEDIR displays a DIRectory of all files on a disk — in their subdirectories
VCOPY selective COPY
WHEREIS searches disk subdirectories for named file(s)

Apricot Disk No. 3

Order no:	**AP003**
Price:	**£15**

A brand-new bumper bundle of utilities you can't live without, culled from both sides of the Atlantic. Highlights:

SWEEP an excellent all-purpose file housekeeper
SCAVEN finds and locks out bad sectors on your microfloppy or hard disk
MEMDUMP to browse through memory on the screen
TURBOKEY — key definition for devotees of Turbo Pascal
SuperWriter XQT macros
HEXFILE creates hex-coded ESCape sequences and the like (comes with som fun MicroScreen-driving demos)

Games

Order no:	**AP004**
Price:	**£15**

For the first time on Apricot a disk of games — and nothing but games. Some in Basic, some in EXEcutable form. Includes 747SIM (fly your own 747: a very tough flight simulator) plus favourites like AWARI, TOWERS OF HANOI, and many more besides. A very full disk.

GSX User's Disk

Order no:	**AP005**
Price:	**£15**

The complete GSX tutorial from Lindsay Doyle — includes demo programs, a library of ready-to-use Basic subroutines that drive GSX, a set of five printable Workshops in text form (this series is running in APRICOT FILE now), and Lindsay's improved HEXPAWN game IMPHEX (which among other things demonstrates something not unlike artificial intelligence).

Demo Disks

Try before you buy? Here's your opportunity to check out our selection of some of the best Apricot packages — and to do so without a salesman hassling you to write a cheque for them. All disks are priced at £15 including despatch and VAT.

ASPECT Demo

Order no:	**AD001**
Price:	**£15**

Powerful and flexible information management system for non-programmers - lets you create menu-driven file-oriented applications quickly and and easily. A pleasant change from the rash of US-derived products.

BusiPost Demo

Order no:	**AD002**
Price:	**£15**

Excellent British mailing list package - fast and flexible. Not available for the Apricot F1.

ChartMaker Demo

Order no:	**AD003**
Price:	**£15**

Scientific/technically-oriented graphics from keyboard input or files created from database and spreadsheet programs. Lots of graph-drawing functions built in.

Delta 4 Strategy Disk

Order no:	**AD004**
Price:	**£15**

The demo for the latest version of Compsoft's best-selling all-British database manager

Letterer-Set Demo

Order no:	**AD005**
Price:	**£15**

Interesting little utility that lets you print on any dot-matrix printer any typeface that can be displayed on your Apricot screen

MENUGEN Demo

Order no:	**AD006**
Price:	**£15**

Demo for a fine menu-creation utility — menu selections can run programs, call other menus, execute MS-DOS commands, etc. Like ASPECT, a Microft Technology product.

PC Programmer Demo

Order no:	**AD007**
Price:	**£15**

Demo disk for a good program generator that lets you produce complex applications software with minimal effort and no need to learn a programming language

Praxis MicroChart Demo

Order no:	**AD09**
Price:	**£15**

All-British business graphics package, ideal for presentation of spreadsheet data etc. Not available for the Apricot F1.

Special software

This modest collection represents our first attempt at purveying conventional packages: 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 Apricot Screen Accelerator

Order no:	**AS001**
Price:	**£25**

Have you slyly suspected that your Apricot screen was a little, er, slow?

Well, you're right. The Apricot screen is slo-o-w-w ... especially when it comes to scrolling about a screenful of text. It really can be quite excruciating scrolling off of a SuperCalc spreadsheet

The rumour is that the designers of the Apricot chose to put various screen-handling impedimentia deep within the BIOS in order that it should not compete on performance too strongly with its then stablemate, the Sirius. And these screen delays have remained there ever since

Until now. FAST is an accelerator for the Apricot screen: it bypasses certain screen interupts. Simply running it in an AUTOEXEC.BAT will cause your Apricot to handle screen text *twice as fast* — it will redraw your screen in half the time it formerly took.

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 ... Available only through TP Group, FAST costs only £25 inc VAT and P&P.

BPS Disk no. 2 — RAMdisk with WordScan

Order no:	**AS002**
Price:	**£40**

The **RAMdisk** is better than the Apricot's freebie; the **Wordscan** word/line/character counter is *very* fast and always useful for anyone who writes text on their computer. Normal RRP is at least £70

All prices include VAT and despatch. Send your order (with payment, if it totals less than £50) to:

APRICOT FILE
TP Group
51 Thornhill Road
London N1 1JT
England

Queries: 01-609 3800

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 ..

Coming soon

One of the nice things about a newsletters (as opposed to a magazine) is its versatility: it takes less time to produce and to print, and because we don't carry ads there are fewer constraints on what article goes where and how long it should be.

This means that we're able to react quickly to events — and those events could be news announcements like the Apricot Xen launch, the arrival of an article sent in on spec, or the opportunity to include more DEALS FOR READERS disks.

For that reason we don't have a rigid 'forthcoming features list'. But we do have on-going series, commissioned articles ready for the next issue, and a lot of plans for APRICOT FILE.

But it's *your* newsletter: tell us what you what to read — and don't hesitate about offering us your articles!

Workshop

The fundamentals of GSX

by Lindsay Doyle

Most people learn to drive a car without understanding how the internal combustion engine works or what the innards of the gearbox look like. A similar approach can be taken to learning how to use the Apricot high-resolution graphics via the GSX (Graphics System Extension) facility.

What you read in this series of six articles should let you drive down the street, park, change a tire, and even venture on to the motorway: but it won't teach you to rebuild the cylinder head, reline the brakes, or design a new suspension.

I'll be talking about using MS-DOS and MSBASIC, but you should be able to apply everything you learn here to CP/M and any desired high-level language — some of my happiest graphics programs are in compiled CBASIC. And the notes here apply to the Apricot PC and XI: for any other models you're on your own, though F1 owners *should* be able to use these articles ...

The components of GSX

GSX for Apricot is an operating system extension which is called up only when needed. It consists of two parts: GDOS was written by Digital Research and applicable to all machines using the same microprocessor, and GIOS (Graphics Input/Output System) was added by Apricot Ltd (when it was ACT) to make the generic GSX applicable to a specific machine.

If you want to use GSX to display high-resolution graphics on the Apricot screen, you must also have a file called a 'device driver' for the screen; to run a printer or plotter you must have device driver files for them too.

Those drivers are generally written by the device manufacturers and incorporate all the necessary functions to make their devices compatible with GSX. For example, the driver for a Hewlett-Packard 7470 plotter will not need a circle-generating function in software because the plotter itself has circle-drawing routines which can be called up by a simple command.

On the other hand, the Apricot screen knows nothing about drawing circles: so its driver must include this function. This compartmentalisation means it becomes possible to write application programs that will draw high-resolution graphics on *any* device, without having to learn and compensate for all the curious quirks of each device.

Further, GSX plus a device driver will automatically scale the desired drawing to the resolution capabilities of the selected device. The screen is pretty good as computer displays go, with the ability to show 800 by 400 dots; but that's nowhere near the resolution of an Epson FX-80 printer, for example, which can do up to 1,920 dots across the paper and as many as you like in the lengthwise direction. A circle drawn on the screen will accordingly look a little rough: but when the same program drives the printer in its high-resolution dot-printing mode, the same circle will look very much more like what Leonardo Da Vinci had in mind.

Files needed

To use GSX you need a file called **GRAPHICS.EXE**, which must be called in order to enter the magic garden. (Doing this will grab a not inconsiderable chunk of memory which you might want for another application, but you can later delete it from memory with a firmly-delivered command of 'GRAPHICS NO' — sounds as if it should be followed by a nice pat on the head and perhaps the invitation to go walkies).

The next thing you need is a file called **ASSIGN.SYS**. This is an assignment table containing the names of all the device drivers you may want to use: it is called automatically by GRAPHICS.EXE. In its virgin form it includes only one name, that of the device driver for the Apricot screen — called **DDACRT.SYS** or perhaps APRICOT.GSX. If you want to run a printer or plotter, you need device driver files for them and you need to add their names to the assignment table.

Had you bought an IBM PC you would have a bunch of free device drivers (for Epson printer in low- and high-res modes, and for the HP plotter). But your friendly dealer can get a disk of equivalent drivers from Apricot Ltd for £11.50; perhaps you could talk him into providing them for free if you promise not to convert to IBM.

A BATch file to get GSX installed

Later in the series we'll talk in more detail about modifying your assignment table. For the present I'm assuming that you are happy to drive the screen only and that you have on hand GRAPHICS.COM, ASSIGN.SYS, and DDACRT.SYS.

To talk to GSX via Basic, which is my present intent, there is one more file needed — **GSXBAS.COM**. This is a little piece of machine code that will load itself into memory well out of the way of Basic and its field of activity; GSXBAS will do the job of calling GSX each time we need to do so.

A handy way to tie up all these items is to write yourself a batch file called (say) GSXLOAD.BAT. It should look something like this:

```
GSXBAS
GRAPHICS
MSBASIC
```

When it's run, this will put all the necessary bits in place and leave you in Basic so that you can write and test programs or call up previously-written Basic programs. (I shall assume that you know how to write BATch files; if not, see the April 1985 issue of 16 BIT COMPUTING on *MS-DOS for Beginners*. I would only mention that COPY CON is very handy here — delete the backslash seen in the example on page 3.2 of the *Apricot MS-DOS User Guide*.)

High-resolution capabilities

What can you do when you have these weapons in hand? With version 1.5.2 of GSX, which was released in July 1984 (and which is available from your dealer as part of MS-DOS 2.11 BIOS 2.6, if you don't already have it) you'll be able to:

- draw seven different line styles (dotted and dashed in various permutations) in one width
- draw any of five different markers (dot, plus, asterisk, circle, and diagonal cross) in any of 400 sizes
- write text in a dot font similar to the normal one
- write text in a stroke font in any rotation and in any of 400 sizes (not so good on the screen, but excellent for plotters)
- draw circles and rectangular bars filled with any one of 20 patterns
- draw arcs of circles and sectors (pie slices)
- draw checkerboard patterns with any selection of fills
- draw arbitrary shapes made up of straight lines, either filled or unfilled
- generate a cursor which will move around the screen in any of eight directions under the control of the number key pad.

(In fact you can do most of these with the previous release of GSX, even though ACT puts out a little undated announcement which says you can't.) ◆

Next instalment: pretty pictures and a utility for generating your own.

Copyright 1985 Lindsay Doyle

The easy way

The text file for the complete GSX series along with the programs and demos due to appear in subsequent articles are available on an Apricot disk from our DEALS FOR READERS mail order service — order no. AS005, price £15 including VAT and P&P.

GSX functions on the Apricot PC and Xi

opcode	meaning	options
WORKSTATION CONTROL		
1	Open device	1 = screen
2	Close	
3	Clear	
4	Update	
FILLED AREAS		
2	Close	
3	Clear	
4	Update	
9	Fill polygon	
23	Set fill style	0 = hollow 1 = solid 2 = halftone 3 = hatched
24	Set fill type	(1 to 10)
WRITING MODE		
32	Set	1 = Replace 2 = Transparent 3 = Complement 4 = Erase
TEXT		
12	Set height	stroke font only (82 to 32767, in steps of 82)
13	Set rotation	stroke font only (in degrees/10)
21	Set font	1 = stroke [BIOS 2.6] 2 = dot [BIOS 2.6] 1 = dot [BIOS 2.7] 2 = stroke [BIOS 2.7]
8	Write text	
MARKERS		
18	Set type	1 = dot 2 = plus 3 = asterisk 4 = circle 5 = cross
19	Set height	(82 to 32767 in steps of 82)
7	Draw marker or set of markers	
DRAWING		
11	Set	1 = bar 2 = arc 3 = pie slice 4 = circle
LINES		
15	Set type	1 = solid 2 = short dash 3 = dot 4 = dash-dot 5 = long dash 6 = dash-dot-dot 7 = close dots
6	Draw line or set of lines	
CURSOR		
28	Set device	1 = keyboard 2 = mouse

Group Test

Teach Yourself MS-DOS

by Paul Humphries

The Apricot is intended primarily for new computer users, the first-time buyer. And one of the main drawbacks that novice owner will encounter almost immediately is the need to get to grips with the operating system — its behaviour, its terminology, its procedures, its persistent demands.

On top of that, the Apricot has MS-DOS 2.11. That means a greater degree of complexity than version 1.25 which was formerly the popular offering.

In view of the dearth of intelligible MS-DOS 2 documentation there's a steady market among frustrated buyers who wish to have MS-DOS reduced to comprehensible terms. One of the ways of achieving that is teach yourself by using one of the modestly-priced self-paced instructions disks now available.

What to look for

To be really useful to the average Apricot owner an MS-DOS tutor would have to meet a number of fairly obvious criteria.

- it should be self-pacing so that you can match your progress to your absorbption
- it should not need screeds of extra information in the form of reference manuals and worksheets
- it should not require tricky set-up procedures before you can get started
- it should cover as wide a range of MS-DOS information as possible — and give more rather than less detail if there's any doubt
- a tutor intended for the Apricot should use the Apricot's function keys and explain these adequately
- it should also fit the particular implementation of MS-DOS 2 that the Apricot employs (a few of the functions and facilities Microsoft provides in generic MS-DOS 2.11 aren't implemented; several are hidden in the Manager's ladder-selection menus and aren't available directly by typing in a single command — notably FORMAT).

Now for a look at the tutors in question and an appraisal of how they match up to the specification.

Hands-On MS-DOS: MicroCal

Now based in Slough, MicroCal is a specialist tutorial supplier that has been active for some years: initially it sold CP/M tutorials to the eight-bit micro user, but now its products encompass a variety of self-teaching packages for 16-bit machines — for programming languages, a generalised intro to micros, and WordStar as well as MS-DOS.

Its MS-DOS pack arrived with a grey handbook with additional information to that on the disk tutorial as well as illustrations and appendices. A five-page instruction set also comes with the manual; it's intended to enable easy set-up by beginners.

Differences in approach are commendably enough highlighted for single- and double-floppy systems and for hard-disk machines — just as well, since the procedures do vary between the F1, the PC and the Xi.

Setting up

I was not thrilled however with the early comment that "if you do not know how to format and copy disks then you may use the originals, but take care not to damage them. You should copy them as soon as you have learned how".

These tutors are aimed at relative newcomers; better advice would have been to set up by following the instructions for your particular computer and disk drive combination exactly. Then the user could take the 'Supervisor' option from the opening menu and make any requisite changes from that. At the end of the initialising sequence, Option 0 can be selected to end the session; and at this point a user could write-protect the master disks by sliding down the plastic tabs. The program can be restarted from the Supervisor entry mode: and the final step should be to select the menu which teaches disk copying.

Another point worth noting if you are new to the hard disk Apricots: the sequence on the drive translation table does not just go up to 'F00' — it must be amended up to 'M00'. This is slightly heavy for a newcomer, and an extra word or two of explanation or a customised table applicable to the actual computer being used would have been helpful.

In use

After this minor carp, how does the program work? Basically, very well.

There are two modes: **Supervisor** and **Tutorial**. If you need to change your program at all, you'll have used Supervisor mode in any event. But beyond this you have the option of entering either mode.

The Supervisor mode implies that you are literally overseeing the tuition of others. As such you won't wish to be put through the interactive question sessions, the simplified approach and the learning progress that is logged every time you

study a module. The facilities provided therefore enable you to overview the course without being unnecessarily restricted.

For the student, Tutorial mode provides a good coverage of the salient features of MS-DOS 2 with the opportunity to break off at appropriate points as desired. In fact you're given three options:

- restart exactly where you left off
- restart at the beginning of the topic being studied
- select study modules from the menu at random

So although the tutorial encourages a progressive regimen of learning with your progress noted by the computer, it is flexible enough to allow you to pick out areas of special interest for primary consideration.

Having progressed to the main menu, the screen notifies you that you may now start ...

- **Using the Microcal system** *(some introductory remarks and notes)*
- **Learning operating systems** *(MS-DOS operating system functions, with some coverage of PC-DOS and CP/M-86 too)*
- **Looking at files and directories** *(filenaming conventions, files and directories, and the TYPE command)*
- **Practicing simple file operations** *(renaming and deleting files — the REN and DEL commands)*
- **Using copy and print instructions** *(using COPY for copying disk files and sending to non-disk devices, listing to the printer with PRINT)*
- **Learning system functions** *(using the control and function keys, formatting and labelling disks, system generation, copying and comparing disks, CHKDSK and RECOVER, EDLIN, batch files, pipes and filters, multiple directories, and the PROMPT command)*

There's also a 'hints and tips' option in the main menu which relates to a reading topic in the Handbook.

Whether you are in Supervisor or Tutorial mode, the 25th line of the screen is always used to display the options open to you. So a typical display would string these along the foot of the screen:

```
NEXT? < > Continue, Recap, Help, Menu,
Study, End session
```

The option required is entered by the typing the initial letter; 'End' is available when you have a full screen of material and will naturally exit you from the program. Your exit point is automatically logged ready for your next session with the tutor — a nice touch.

Opinion

Despite a little more complication on setup than is strictly necessary, this is an impressive and well-organised tutorial. For a newcomer to operating system concepts, it will provide a good foundation to understanding this kind of software — without getting too esoteric.

If you want to learn about the highest level of subtleties in EDLIN or how to manipulate ASCII characters and escape codes, it's not for you. But if you need a well-designed and carefully-considered basic tutor for MS-DOS 2.11, it should suit your needs very well.

Hands On MS-DOS

Description:	MS-DOS tutor for the Apricot — comprises two tutorial disks and manual
UK supplier:	MicroCal Ltd
Address:	Prudential Buildings 95 High Street Slough Berks SL1 1DH
Phone:	0753 75991
Configuration:	Any Apricot
Price:	£49.50
Conclusion:	If you want a tutor which is elastic in style and presentation, which enables you to be either a teacher yourself or a student progressing through the course, the MicroCal disk is for you. It has the greatest depth of detail on the Apricot's MS-DOS 2 of the three disks reviewed here, it is versatile in approach, and it has only the minor drawback that the setting-up is harder than it should be. BEST BUY.

Step By Step: MAC

MAC is another firm that has a variety of tutorial disks — mostly for MicroPro products, WordStar primarily. Its MS-DOS tutor comes in a neat red plastic wallet with an explanatory liner specifying from the outset that the Primer is intended not for programmers but for business users new to computing.

This one is completely disk-based: apart from the brief comments on the liner, all the information about MS-DOS and the Primer is contained within the tutorial.

Setting up

Given my experience with MicroCal, I must confess that I wondered whether this one would be easy to set up. Well, it was — the instructions on the disk said simply "Run by entering SBSMS".

Even so, similar comments apply here as for the Microcal disk. It would have been better if a sheet specific to the Apricot had been included to gave simple advice on how to DCOPY the master on to single-sided, double-sided and hard- disk Apricots — this obviates any risk of a relative novice wiping out a master disk.

On the credit side MAC has done some sound thinking to avoid burdening newcomers with set-up procedures. The authors reasoned correctly a single-sided Apricot Master would cover all machine configurations; and that printing out of relevant information could be handled by MS-DOS, which would already be set up on your machine — the least knowledgeable user can simply switch on, stick in the disk and get going.

In use

The opening menu is brief:

```
N       New Users start here
F       Part 1  Facilities and features
C       Part 2  Commands and procedures
B       Use of the BROWSE facility
E       to EXIT
```

There are five basic facilities you can use at any time:

- [B]rowse
- [M]ore
- [R]ecap
- [P]rint
- [E]xit

They're self-evident in application, but it's worth noting that the selective use of the Print option will enable you to make up a personal handbook tailored to your individual needs.

When you start with the 'N' option, you get a brief rundown on what constitutes an operating system and an instant precis of what can expected throughout the course. The organisation of the Primer is also explained.

Having finished with the introductory module it would be logical for you to proceed to the Part 1 section (though nothing prevents you from accessing any other information at any point in the tutorial). Part 1 opens with this menu:

```
1       What is MS-DOS?
2       Loading MS-DOS
3       The Filing System
4       File specifying
5       File matching
6       Default drive
7       Device assignment
8       Disk management utilities
9       MS-DOS and applications Software
```

The modular approach is intended to give basic information on the selected topic, then to raise the possibility of a Recap; or you can select More (to get deeper coverage of the subject); or you could Exit from that section of the program.

Much of the text employs excellent analogies to drive home its message. For example, the section on file-matching illustrates wild-card functions by wild cards in Canasta.

Periodically — though not as often as with the Microcal package — there is an opportunity for the user to interact with the program in answering questions posed. Wisely, MAC does not prolong the agony in the case of wrong answers: the error is noted on the screen and you're told what you should have typed, thus allowing you to proceed quickly.

Part 2 covers MS-DOS commands and procedures with a two-item menu: you select 'The Commands' or 'The Disk Management Utilities'. The Commands module covers six of the basics: DIR, DEL, REN, TYPE and COPY plus '.BAT The Batch command' (actually it's not a command, but you know what they mean).

The treatment given to these is straightforward enough. For example, when you get through the details of one command and then take the option to print out the salient information, you'll end up with a printout detailing the command's main features.

In the case of REN this runs to one and a half pages; you're told that it has the format ...

```
REN <old filespecifier> <new filespecifier>
```

Which is reasonable enough, though it may appear that MAC has gone over the top and lapsed into computerese. But despite a few technical terms, MAC saves the day with clarifications:

```
B>REN WIDGET.BAK TEMP.DOC
```

As MAC points out, this renames WIDGET.BAK as TEMP.DOC on drive B.

This particular module also gives information on what happens if you try to rename an old file as an existing file, or if you try a rename when the original no longer exists.

The Disk Management Utilities subsection covers the five principal commands of relevance — FORMAT, DCOPY, CHKDSK, BACKUP and RESTORE. There's enough detail for beginners here, with the 'More' facility available for extended coverage.

Opinion

The MAC tutorial is very good. There are minor irritants; but the overall quality is high, and it is especially well suited to the stated target audience of first-time users.

Step By Step Operating System Primer

Description:	MS-DOS tutor for the Apricot — comprises two tutorial disks and manual
UK supplier:	Mid Anglia Consultants Ltd
Address:	26 New Street St Neots Cambs PE19 1AJ
Phone:	0480 217175
Configuration:	Any Apricot
Price:	£65
Conclusion:	Sane, sound, and easy to use. This one is the easiest to get started, with only a single instruction to type to get the program running. And if the idea of customising your own handbook appeals to you (it will enable you to compile the MS-DOS material in which you need prompting) the unique provision to print out needed material will appeal. No copyright neuroses here! Lacks the depth of coverage in MicroCal, but apart from that is WORTH CONSIDERING.

MS-DOS TRAINER: ATI

ATI is an American company long established in self-paced computer training. Its MS-DOS tutor arrived (after some delay) as a single disk configured for the Apricot; I do know however that the original was for IBM machines, and this was then converted for the Sirius/Victor 9000 (as the grey A5 ring binder clearly suggests) before it was ported on to the Apricot.

This tutor is the simplest of the three in approach. The manual has 38 pages of well-spaced advice; and the concept has clearly been to keep things as basic as possible, so there's not the detail here that you will find in the other trainers (especially Microcal's).

In use

ATI's approach is to offer the option of progressive tuition through the main body of the material or review of selected sections of the topics discussed. The tutorial is straightforward and obviously aimed at a first-time user, so there is no break-off provision: but the course is easily assimilated and the material is unlikely to take you more than two hours to work through, so I suppose that this isn't the drawback that it otherwise might be.

If you take the second option (selective tuition), the screen comes up with this menu of commands:

```
1.    DIR
2.    ERASE
3.    TYPE
4.    REN
5.    COPY
6.    BATCH

B     To bypass these commands for the
      MS-DOS external series
```

Brief notes are given about items 1 to 6; and there's also a short mention of the TIME, DATE, PAUSE and REM facilities — the trainer suggests that you examine these through your MS-DOS manual, though.

The items that are on the menu are explained satisfactorily (despite the odd preference for 'erase' rather than 'delete' in the menu) and suitable examples are given to illustrate the points made. The screen splits, giving notes at the foot of the display while you make entries (via the cursor) at a simulated A> prompt higher up the screen — a very good tuition feature that works well.

If you take the Bypass option you get a sub-menu with a range of MS-DOS external commands:

```
CHKDSK
EDLIN
FORMAT
DISKCOPY
SYS
```

Difficulties start to arise here. On the Apricot there are no FORMAT and no SYScopy commands; ATI does say that not every version of MS-DOS offers the same set of external commands and some of those listed may not apply, but I feel an apparent variance between the training package and the reality of MS-DOS on the Apricot will result in heavy going for the novice user.

But the rest of the information is satisfactory and the teaching method employed simple and effective.

The handbook, though short, is well-written and contains clear instructions under four main headings. The opening section, 'Monitor System', gives good, clear notes. But the 'Prepare System' chapter is unuseable for the Apricot (you'll find no FORMAT, SYS or DISKCOMP commands) and you'll have to find the alternatives for yourself. The 'Maintain System' section is ok, and 'Trouble Shooting' is quite good — simple but adequate explanations.

Opinion

The approach is straightforward: and all the internal and external commands are treated with no unnecessary frills or surplus material. The result — a really basic introduction to MS-DOS.

But remembering the agony I went through when I was first trying to assimilate the complications of MS-DOS 1.25 and CP/M-86 from the semi-literate handbooks supplied, I doubt that the average user will welcome a tutor that just does not align in detail with his or her version of MS-DOS 2. And in view of this and the lack of enthusiasm that ATI has shown in customising the trainer for the Apricot, it's impossible to recommend this disk.

ATI MS-DOS

Description:	MS-DOS tutor for the Apricot — comprises two tutorial disks and manual
UK supplier:	System Design Software Ltd
Address:	32 Broad Street Wokingham Berks RG11 1AB
Phone:	0734-792021
Configuration:	Any Apricot
Price:	£50 ... "soon to drop"
Conclusion:	The split-screen interactive tutorial method is good, but I believe that many novices would be fazed by the differences between the tutorial and their version of MS-DOS on the Apricot. NOT RECOMMENDED.

In conclusion

None of these trainers use the function keys on the Apricot, either in training or by real explanation of their effects within MS-DOS. For this they all deserve some criticism.

As for the depth of coverage, only MicroCal describes anything like the full range of MS-DOS 2.11 commands — and they all neglect some important Apricot MS-DOS features (pipes and filters, the FONT and KEYS utilities, the hierarchical menus of the Manager's ladder). True, some of these are not specifically *MS-DOS* facilities; but the boundary between operating system and utilities is blurred in the Apricot, and it would have been very helpful to Apricot users to have had this kind of related information.

Overall, though, the clear winner from this particular batch is **Hands-On MS-DOS Tutor** from MicroCal. Despite the concerns about the recommended start-up procedures, this program turned out to have a flexible approach with considerable depth of coverage and clarity of presentation. ◆

Workshop

Working with SuperCalc

by Randall McMullen

A SuperCalc function is a built-in ability to calculate something like an average, or to compare and choose values. The usefulness of a SuperCalc function lies in the way it can work with the changing contents of cell references, instead of fixed numbers.

The table in the example lists years and a corresponding price for each year. Any one year can be chosen as the reference year against which the others are compared. In the price index column the reference year is converted to 100 units and the other years are given values relative to 100; this complete column adjusts itself automatically when you specify a new base year in cell C3.

When you enter the reference year, the LOOKUP function moves down the year column and finds the corresponding value in the price column. The column to be 'looked up' must be to the right of the search column (or in the row below the search row). The price found by the LOOKUP function is placed in a cell, from where it can be used by the other formulae.

	A	B	C	D
1	PRICE INDEX			R MCM
2				
3	Enter base year:	1980		
4	Gives base price:	LOOKUP(C3,A8:A18)		
5				
6	Year	Price	Index	%Change
7				
8	1976	30	B8/C4*100	
9	1977	36	B9/C4*100	(B9-B8)/B8*100
10	1978	41	B10/C4*100	(B10-B9)/B9*100
11	1979	46	B11/C4*100	(B11-B10)/B10*100
12	1980	50	B12/C4*100	(B12-B11)/B11*100
13	1981	54	B13/C4*100	(B13-B12)/B12*100
14	1982	58	B14/C4*100	(B14-B13)/B13*100
15	1983	63	B15/C4*100	(B15-B14)/B14*100
16	1984	68	B16/C4*100	(B16-B15)/B15*100
17	1885	72	B17/C4*100	(B17-B16)/B16*100
18	1986	77	B18/C4*100	(B18-B17)/B17*100
19				
20			Average%	AVERAGE(D9:D18)
21				
22	SC3 Labels			
23	INFLATION			
24	Unit price			
25	(Area graph)			

The AVERAGE function produces the same effect as adding up a list of figures and dividing by the number of items. The list of items is specified by the references of the first and last cell. Before you claim a pay increase on the basis of these calculations, you should be aware that the

government price index uses more complicated formulae than ours!

If you have SuperCalc 3 you will be able to display the ravages of inflation as a graph. Although pie charts have great appeal to the executive eye, they can only display one dimension or set of data; so the example chosen shows how to display two set of data as a stacked bar graph.

Building the sheets

Start with a clean empty spreadsheet, by using the /Z Zap command if necessary, and enter your own labels on the first line (this is displayed as an identifier when SuperCalc lists .CAL files).

In the example I have displayed the formulae in their actual cells by using the /G F command. This is convenient here; but normally the *results* of formulae are displayed in their cells.

	A	B	C	D
1	PRICE INDEX			R MCM
2				
3	Enter base year:		1980	
4	Gives base price:		50	
5				
6	Year	Price	Index	%Change
7				
8	1976	30.00	60.00	
9	1977	36.00	72.00	20.00
10	1978	41.00	82.00	13.89
11	1979	46.00	92.00	12.20
12	1980	50.00	100.00	8.70
13	1981	54.00	108.00	8.00
14	1982	58.00	116.00	7.41
15	1983	63.00	126.00	8.62
16	1984	68.00	136.00	7.94
17	1885	72.00	144.00	5.88
18	1986	77.00	154.00	6.94
19				
20		Average%		9.96
21				

Enter the text labels displayed in cells A3, A4 and B20, and row 6; and enter the year labels shown in cells A8 to A18. Also enter the LOOKUP function which is displayed in cell C4.

Cell C8 contains a formula which can be quickly extended down the remainder of the column with the Replicate command. Use the Adjust option and answer No when asked if you want to change reference C4:

```
/R C8 , C9:C18 , A Y N
```

Similarly, enter the formula shown in cell D9 and use the Replicate command:

```
/R D9 , D10:D19 Return
```

Cell D20 contains the AVERAGE formula which can be entered as AV(D9:D18). Cells A22 to A25 are a 'scratchpad' for SuperCalc3 graphics which can be placed anywhere convenient and wouldn't normally be displayed.

SuperCalc 3 graphics

With SuperCalc 3 you can display any figures on the spreadsheet as a graph. Start the process with the /V View command and you will see options on the prompt line. Use the Data option to specify which sets of figures are to be graphed.

As an example, the 'Price' figures and the '%Change' are entered with the sequence:

```
/V D B9:B18 Return
D [SPACE] D9:D18 Return
```

(You should still be in the View command — if not, press /V again.) You can sneak a look at the graph on screen by pressing Return (or VIEW on the Apricot microscreen). Unless you tell it otherwise, SuperCalc 3 will take the first set of data that you entered (Prices) and display it as a bar graph.

To specify a stacked-bar graph, where the second set of figures is 'stacked' on top of the first, use the following command:

```
/V G S
```

Headings and labels are added to your graph by specifying the cells, such as A23, where the text has been written. Several different styles of print (fonts) can be chosen; and the whole thing can be printed by a common-or-garden Epson-style printer.

Copying and Replicating

Copying and Replicating may sound like the same operation; but there are useful differences.

The /C Copy command takes one area of the spreadsheet and exactly duplicates it on to another area. The /R Replicate command takes one area and repeatedly copies it to another area until the 'target' area is filled.

If that still sounds the same idea, concentrate on the fact that Copy *always* involves the same-sized area of spreadsheet before and after the copying — block to block, for instance. The Replicate command can *multiply* the number of cells produced — such as cell to block.

In both commands the prompt line displays the options available at each stage.

When cells are copied or replicated the formulae are adjusted so that all cell references are changed to be as correct as possible for the new location. This is marvellously clever and more often than not is just what you want.

Sometimes, however, part of a formula needs to stay the same — such as the C4 base price in our index formula. Because SuperCalc has no mind-reading facility (yet) you must tell it what to change by selecting the Adjust option; so press the comma key instead of Return when you have entered all the cell references. The options now include keeping all formulae as they are, or changing just some of the cell references in a formula. ◆

Legislation

Protect and survive

by Henry Deckhand

For a law which is supposed to protect the passengers on the Clapham omnibus from having Big Brother watch too closely over their shoulders, the early pronouncements on the new Data Protection Act have all the credibility of a naughty boy making up his excuses as he goes along.

The Data Protection Act became law in July, and its provisions started applying after 12 September — after that date anyone could seek legal redress for inaccurate or misused information held about that individual on a computer, provided the database itself qualifies for Registration.

Said Registration costs £22. It involves filling out forms (which you can get from main Post Offices or from the Office of the Data Protection Registrar) and sending them off with the fee. Although an individual could sue from September, registration doesn't actually start until 11 November; if you run a qualifying database, you have until next May to get the details (and your £22 per database) to the DPR.

The Office of the Data Protection Registrar has been issuing 'guidelines' on the Act. Very helpful — except that we're warned the 'guidelines' may have been superceded by their first revision by the time you read them. "Each new Guideline," says the Office of the Data Protection Registrar, "will restate the validity of each section of any subsequent or superceding Guidelines." Oh good.

On the other hand, you shouldn't necessarily believe what's in the Guidelines: they are not "definitive interpretations" and "should not be taken as formal decisions of the Registrar". Such decisions, you'll be pleased to know, will "be made known through a separate series of documents".

The Government has espoused the altogether admirable cause of protecting the person from inaccurate or illegally-held data, albeit in a much more modest form than most other European countries. But the bets-hedging suggests that someone up there has decided it may not be such a good idea, after all. Or would that be unreasonable cynicism on our part?

Act of mercy

Briefly, the Act posits three types of people. "Data Users" are those who "control the contents and use of a collection of personal data". Computer Bureaux, who process such data for Data Users, are also included. And "Data Subjects", about whom personal information is held, may be better known to you and me by the term 'people'. (Or, as the Data Protection Registrar puts it in his 'Dear Computer User' letter, "individuals — you and me". All clear now?)

Both bureaux and Data Users must register with the Data Protection Registrar; and both must comply with a (pretty vague) code of conduct, subject to (pretty vague) penalties.

The Act is supposed to protect the rights of the individual, guarding against the misuse and abuse of information collected on 'data subjects' and stored in, manipulated by, and transferable from computer systems. It requires that such databases be registered; and it gives some new rights to individuals. You can demand to see any data held on you, you can require the correction or deletion of inaccuracies, and you can sue "for damage and any associated distress" resulting from "the loss, destruction, unathorised disclosure of data or by inaccurate data".

Sounds great. A major weapon in the defence of civil liberties, right?

Well, yes and no. For starters there's the suspicion that we have the Data Protection Act for distinctly iffy reasons: it's based on the Council of Europe's 'Conventions for the Protection of Individuals with Regard to Automatic Processing of Personal Data', and the EEC is proposing sanctions on cross-border transfers of such data unless both sides of the border have fallen into line on legislation. In short, the absence of a Data Protection Act or something similar might well damage a small area of Britain's trade. And now that the oil's running out, the Balance of Payments needs all the help it can get ...

But no more than is absolutely necessary. For the Data Protection Act covers *only* information stored in computers: you could still keep two dozen filing cabinets full of *paper* records about the rumoured sexual proclivities of individuals without infringing the Act. You put xerox copies of the lot in the back of the Range Rover and cart it over to another EEC country without breaking the Conventions.

And will it really protect anyone's rights? The Office of the Data Protection Registrar has published a two-part 'Application for Registration' form to be filled in and sent off with the registration fee. Part A is identification of the registrant, name and address stuff; you fill in that only once.

Part B has to be repeated for each 'purpose' of a database and for each database you have — that could mean a lot of Part Bs. Most of the key stuff is entered by ticking the right box for the type of 'data subjects' a database holds and the type of information you have on them; you also indicate where you got the info, to whom you might

disclose it, and to which countries you might send it.

There's a booklet of 'Notes to help you apply for registration' which amplifies what the tickable boxes mean, so you're not entirely on your own.

And that's it. Except for the major question of whether or not you should register in the first place.

If in doubt, register. It's by no means clear whether this law is capable of implementation, and there are certainly many grey areas in which databases do qualify; but for £22 it's not worth taking the chance.

True, it's not the case that "all computer users with information on file" must register (that's the claim in a press release for one of the instant-print 'guides to the Act' that have sprouted up).

And the DPR's guidelines do specifically exclude records required for the normal operation of your business (like a payroll) or those that contain minimum information (such as a name-and-address mailing list). Beyond that, though, it all gets rather dodgey ...

Protection or not?

So how does the individual find out who's got files on him or her? You look down the Data Protection Registrar's list and you guess. Eric Howe, the DPR himself, reckons that he'll have 300,000 registrations.

Then what? You ask for a copy of the record about yourself. When (if) it finally turns up, you can claim compensation in the courts for any "damage and associated distress" arising from "inaccuracies in such data" or from "lack of security surrounding personal data".

Quite apart from the protracted timescales that will necessarily be involved in this process it's obvious that (a) the legal profession's cash registers will again be tinkling merrily; and (b) the DPR doesn't know how things will work in detail. The day-to-day rules and procedures will be decided in the Courts, with judicial decisions and precedents determining what the Act really does and doesn't cover, what redress the blighted individual actually has, what rights and restrictions apply on all sides.

The fact that there are any penalties at all has been worrying some companies. But there are exemptions that should ease the minds of most firms. Apart from the obvious non-registrants (from databases relating to "national security", those containing information which people are required by law to make public, and information held by individuals for domestic reasons) the Act also says you don't have to register files concerning payroll or personnel data. Nor do you have to register the kind of information that ends up in business accounting; and the average mailing list also appears to be exempt.

But still leaves a lot of grey areas. How about personal opinions and evaluations on suppliers or others you do business with? Those you might have somewhere in the text area of a purchase accounting system. Who gets what gifts at Christmas and why? You might have a sales file justifying Glenfiddich for one and a ballpoint pen with your company's logo for another. Should they be registered? And a mailing list containing only names and addresses may be exempt — but as soon as you've got any other information on those records, it becomes a candidate for registration: how much extra information? Lord knows.

The Data Protection Act gives only partial protection to individuals: the law-'n'-order exemptions and the exclusion of non-computerised data don't help its credibility. And the sheer effort and time that will be involved in finding facts and creating judgements makes any claim about protection a bit hollow.

More info

The first of what's promised to be a series of those Guidelines has been published. It's free (try a Citizens Advice Bureau, or call the Office of the Data Protection Registrar on 0625 535777 for a copy) and since the Data Protection Act is pretty well all-encompassing, it's probably worth a read.

And there are a couple of independent organisations offering help and advice (or maybe just jumping on a bandwagon). The **National Computing Centre** has a 'Data Protection Act Resource Pack' which is reportedly pretty good in explaining what *is* known about the Act; that costs £55.

The one we haven't seen is from **Financial Trading Publications**, costs a modest £9.95, and is entitled 'A Guide to the Data Protection Act', a revised version of a 1984 publication by a bloke from the Cranfield School of Management and another from Trent Poly. ◆

Contact points

Office of the Data Protection Registrar
Springfield House
Water Lane
Wilmslow
Cheshire SK9 5AX
tel. 0625 535777

National Computing Centre
Oxford Road
Manchester M1 7ED
tel. 061-228 6333

Financial Training Publications
131 Holland Park Avenue
London W11 4UT
tel. 01-603 4688

▶ CONTINUED FROM PAGE 1

The 80286 is of course the same processor that features in IBM's PC/AT, a £4,000-plus supermicro which has been causing a lot of excitement among the technological cognoscenti — with the fast chip and a lot of RAM it becomes feasible to run the kind of programs that would be too slow and/or too memory-hungry for a conventional 16-bit processor. The obvious candidates are Microsoft's Xenix, a Unix-like operating system that permits multiple-user operation; and processor-dependent number-crunching applications like CAD and scientific/technical work.

There are already a number of AT look-alikes from independent manufacturers — some of them considerably cheaper than IBM and not too far away from the Xen price. But Apricot Ltd (the name has been changed from ACT, perhaps to protect the innocent) has stolen a march or two on them. For start, it's not actually an AT clone: it claims to run "most" software for the AT, but frankly we doubt that.

The compatibility is supposed to come from an add-on IBM-format disk drive, an add-on box called the XP, and a ROM BIOS emulator. Well, the add-on disk is no big deal; Alpha Disc can already sell you such a disk drive for your bog-standard Apricot. In practice this just provides *media* compatibility, meaning you can read IBM-format disks; but that doesn't help you *run* the programs thereon.

The XP box has space for two IBM-type circuit cards. The paucity of expansion in this is compensated by the six Apricot-type boards inside the Xen; the argument apparently is that practically any expansion option you might want is available in Apricot format, the XP being reserved for oddities like add-in modems.

The BIOS emulator *should* allow you to run IBM software. But the older and wiser among us think back to the Albert Hall eighteen months ago and the promise of '80 per cent IBM-compatibility' in the Apricot. The basis for this was a piece of software which purported to do a similar job to Xen's BIOS emulator — but in practice didn't run a lot of IBM software because much of it depends on key aspects of the IBM hardware. And the Apricot hardware just isn't IBM compatible.

Details on the Xen's BIOS emulator were rather sketchy when the thing was shown to the press; in fact, IBM-compatibility was distinctly underplayed. "What IBM software can it run?" we asked; some havering was followed by the offer of Perfect Writer as the example ... Well, it's an ok word processor, but it hardly represents the most machine-specific use of an IBM.

All the software on show at the press launch — including 1-2-3, Framework 2, Windows, and Microsoft Word — was from the *Apricot* rather than IBM implementations.

As the woman from Lotus said, "We can't commit ourselves to a delivery date until we have a stable product. And then it'll take two months." By 'stable product' she meant a stable hardware design, which hopefully is imminent or has already been achieved.

And how about Apricot-compatibility? The Xen is described as "fully compatible with existing Apricots ... Xen offers the best of both the Apricot and IBM worlds". But Lotus was demonstrating the Xi version of Lotus 1-2-3, and even that apparently wasn't running happily. Which casts some doubt on the claim for "total Apricot compatibility".

Still, to be fair, the Xen is really being positioned as an *alternative* to the AT rather than a *replacement*.

As the table indicates, Xen is both faster and cheaper than an AT. In theory this makes it highly attractive to value-added resellers, the kind of people who used to be called 'system developers' — they typically add software and maybe some hardware to a computer before selling it to a specialised audience.

To date, ACT hasn't shown much interest in going after the VAR business. It is however an established method of selling beefy computers; the PC/AT and Olivetti/AT&T 3B2 are typically sold that way.

ACT has formerly concentrated on volume selling of rather simpler systems using the established dealer route — lots of dealers shifting lots of units. Going up-market means a rather different approach, and Apricot Ltd says it will allow only 200 or so of its 500-700 registered 'dealers' to sell the Xen. These are being referred to as 'charter' dealers; they have to demonstrate a degree of technical competence (which apparently means they've had to attend courses on networking and suchlike in Birmingham) as well as impressing with their marketing skill (presumably by having sold a lot of Xi and Point 32 systems — and having paid for them).

Whither ACT

This year has so far been an interesting one for Apricot Ltd. Despite keeping up the volume of sales — we're told that the group shipped nearly 16,000 units in the first half of the year — the company forecast a loss in the six months to the end of September.

In fact the problem is one of profitability; sales were expected to be up to £50 million from £35 million at the 1984 mid-point. (Mind you, the stock market analysts were expecting £60 million

and that helped the share price to plummet: but then no-one should take too seriously the prognostications of those people as they apply to the computer business.)

Apricot Ltd — which renamed itself from ACT in August "in order to convey the group's emphasis on microcomputer interests and to reinforce the link between its product and corporate names" — has found itself with four major problems. These were a duff product (duff in marketing terms, anyhow); the high costs and low returns of international expansion; a profusion of products, some of them overlapping; and an approach to marketing management which worked once but was not longer appropriate.

The Portable was the iffy one. Its launch a year ago was resplendent with phrases like "the most advanced portable computer currently available ... a computer that will in years to come be regarded as a major milestone in personal computing ... makes no compromise in functionality". And it was featured at the press conference at the end of 1984 announcing the new drive into the States; according to Roger Foster the Portable was "our wild card" in the US market and "could catch the imagination of the US buyer".

On the other hand, the market for portables in general seems to have flopped miserably. And the Apricot Portable can best be summed up by our July 1985 review in 16 BIT COMPUTING:

"The Apricot Portable is an interesting computer: techno-freaks and journalists love it — not least because it is the kind of machine that will keep them both in jobs. And it scores points too because there's no IBM sticker on it."

The reviewer concluded: "I give it full marks for the technology employed in its design and its architecture. But does the world need it? A prolonged period of teething troubles followed by low sales bring the words 'White Elephant' to mind ..."

Apricot Ltd still stocks and sells the Portable — now called the 'FP' after the 'Apricot Collection' exercise, of which more later — but it's no longer a serious money-making proposition for the manufacturer or the dealer. The much-publicised anouncement of those ugly half-year results were occasioned partly by writing down the inventory of Portables to the tune of £3 million.

At least that gives some scope for clearance sales at bargain-basement prices. And that's exactly what IBM and Data General (among others) appear to be doing with their own portable computers right now. Both have announced swingeing price cuts that take their machines to the £1,000 level. Confirmation that there just isn't a market for this kind of computer?

The cost of expanding

So Apricot "took a bath on one bad product", as one of the company's senior management put it. Another reason for the mid-term flop was the overseas expansion; "it cost us more than we had anticipated to set up overseas". The US venture has been a slow starter; France and Germany cost more than expected — the sum of £1.5 million has been mentioned.

All three are said to be doing better now in terms of units sold; but the units they *are* selling aren't the profitable lines. All are shifting lots of the low-margin F series. That provides a nice investment for the future in terms of a customer base to be upgraded one day, and it keeps up the production volumes; it just doesn't make the group much money in the short term, for the larger Apricots obviously earn it a lot more per sale.

Which leads on to the third problem, the proliferation of products. In the last 18 months ACT has taken a seat-of-the-pants scattergun approach to product development. Someone at ACT realised that a sub-£1,000 computer could be built: so it was done. Someone realised that different combinations of memory boards and disk drives could be packaged inside the Apricot PC casing: so it was done. And to some extent the market justification for the new products came later — or not at all.

That left ACT with a whole bunch of separate products, some of which appeared to compete with each other. Confusion for the dealer, who really wants a single high-margin all-purpose product the name of which the punter already knows: simplifies the selling job, optimises the amount of time and effort it takes to make the sale, maximises the opportunity for selling high-profit add-ons like boards, printers, and software.

ACT's Spring launch of the F2 and F10 included an attempt at rationalisation by semantics. The products were bunched together in three groups to enforce a perception of different functions and different markets. The original single-disk F1 and F1E, the single-disk machines, were branded 'Apricot Gateway': under £1,000, aimed at schools and impecunious first-time users and bulk buyers from big organisations who wanted to provide low-use executive toys for corporate management. The twin-floppy F2 and the hard-disk F10 were joined by the FP portable under the 'Apricot Collection' umbrella, and that name confused everyone. 'Apricot Professional' made a better cognomen for the original PC (Avocado White) and Xi (Mandingo Black), since you could legitimately see them being used by professionals.

But that was still too many computers — too many for the dealers, too many for the buyers. The Xen launch included a few asides about rationalising the product range, though it still looks complicated:

□ the **F series** remains (contrary to some press reports). Which means four low-end models plus the FP portable

□ the original **Apricot PC line** has been reduced to just two models — onew with twin 720KB floppies and 256KB memory, the other being a 10MB hard disk with 720KB microfloppy. Gone are the 5MB and 315KB disk versions

□ the **Xen** is regarded as the group's flagship now, both in technical terms and for revenue-earning. "Today is an important day for us" declared Roger Foster at the press launch, "probably the most important day since we launched the Apricot PC ... We believe that Xen can be even bigger for us".

So where does this leave Apricot Ltd? Perhaps not quite so limited. The product range makes more sense now, and there seems to us to be a greater air of reality about the boys from Brum. Some important management changes have been taking place on the marketing side, with more emphasis on dealer management rather than product lines — the dealer won't have different people to talk to for different products. That kind of reorganisation bodes well.

The half-year disappointments must have been a considerable shock after several years of unalloyed growth. It's to Apricot's credit that the news was published now rather than hidden in the year-end figures due next Spring; the management is obviously confident that Xen plus the product and marketing reorganisations will mean a satisfactory set of figures at that time. ◆

Xen versus PC/AT

		Xen	PC/AT
Processor:	chip	80826	80826
	speed	7.5MHz	6MHz
Expansion:	IBM-type PCB slots	2 *[option]*	8
	other expansion slots	6	0
Memory:	standard	512KB	512KB
	maximum	5MB	3MB
Monitor options:	low-res colour	yes	yes
	high-res colour	yes	yes
	green-on-black	yes	*from independents*
	black-on-white	yes	*from independents*
Disks:	floppy size	3.5in	5.25in
	floppy capacity	720KB	1.2MB
	add-on floppies	one 5.25in *[option]*	*[up to three drives per unit]*
	internal hard disk	20MB	20MB
Performance:	PCW benchmarks average	3.9 secs	6.3 secs
	max. no of Xenix users	16*	3

* ... "realistic average" quoted as seven or eight users

Xen pricing

	Price	Available in volume *
Systems unit:		
2 x 720KB floppies, 512KB RAM	£2,095	November 1985
1 x 720KB floppy, 20MB hard disk, 1MB RAM	£3,095	November 1985
Monitor options *[including adaptor cards]*:		
low-res colour (640x200)	£690	November 1985
high-res colour (640x350)	£990	January 1986
green-on-black (800x400)	£395	November 1985
black-on-white (800x400)	£540	November 1985
Options:		
XEN-COM telephone/modem/software package	£395	January 1986
XP expansion box for two IBM-type cards	£195	January 1986
add-on IBM-compatible single-disk drive	£295	January 1986
80827 numeric co-processor chip	£295	November 1985
add-in 20MB hard disk	£995	November 1985

* ... some units will be available in October; production quantities are not expected until next month

Diary dates

On with the show

October 1985

21-22: **Britain has IT: Successful Office Automation** — *Edinburgh.* Two days of free "briefing sessions" providing "guidance on how to maximise the business opportunities offered by office automation". Organised by management consultants PA and the DTI, touring numerous venues around Britain. Sounds as though it's aimed at non-computerate corporate management in larger companies, but PA has a good reputation for this kind of information technology overview ... *Organiser: Information Technology Conferencing, tel 0923 771572*

22-25: **International Business Show** — *National Exhibiton Centre.* IBS is the biggest single business show in the country; just about every conceivable business-oriented product or service will be on view. Last year an acquaintance who went to the show looking for a small computer came back with a new source for padded envelopes that he reckons saved his firm a couple of thousand quid during the next six months ... There *must* be something there for everyone. *Organiser: BED Exhibitions, tel 01-936 9344*

22-25: **Techmart** — *National Exhibiton Centre.* Sponsored by Barclays Bank, promises 120 exhibitors with "the most up-to-the-minute ideas and equipment". Handily coincides with IBS; should be fun, could be useful. *Organiser: NEC Exhibitions & Events, tel 021-780 4171*

29-30: **Britain has IT: Successful Office Automation** — *Aberdeen.* The touring two-day no-charge "briefing sessions" on "how to maximise the business opportunities offered by office automation". See the comments under 21-22 October. *Organiser: Information Technology Conferencing, tel 0923 771572*

28 October - 1 November: **Systems 85** — *Munich.* Big communications-biased show that also covers any and all computer-related products. 94,000 visitors last year. *UK contact: ECL, tel 01-486 1951*

November 1985

5-6: **Britain has IT: Successful Office Automation** — *Leicester.* The touring two-day no-charge "briefing sessions" on "how to maximise the business opportunities offered by office automation". See the comments under 21-22 October. *Organiser: Information Technology Conferencing, tel 0923 771572*

12-13: **Britain has IT: Successful Office Automation** — *Leeds.* Another running of the free PA/DTI "briefing sessions". *Organiser: Information Technology Conferencing, tel 0923 771572*

12-15: **Compec '85** — *London.* Rejuvenated over the last couple of years. Retains its original peripherals/systems integrators bias, but includes many first-time-user exhibits too. *Organiser: Reed Exhibitions, tel 01-643 8040*

18-21: **CommuniTech & Computer 85** — *Kuala Lumpur,* at the brand new Putra World Trade Centre. First time out for a show-plus-conference described as "the first total electronic communications, office automation and business computer event" to be held in Malaysia. Weather should be quite nice that time of year, too ... *Organiser: Malaysian Exhibition Services, tel Malaya (KL) 951717. UK contact: Overseas Exhibitions, tel 01-486 1951*

19-20: **Britain has IT: Successful Office Automation** — *Newcastle.* Another running of the free PA/DTI "briefing sessions". Comments as for 21-22 October. *Organiser: Information Technology Conferencing, tel 0923 771572*

19-21: **Computers in the City** — *London.* Being all about computerisation for big business and heavy finance. *Organiser: OnLine, tel 01-868 4466*

19-21: **Microcomputer Week** — *Essen.* Smallish one-city-every-two-months West German event. *UK contact: Network Events, tel 0280 815226*

25-28: **Gulf Computer Exhibition** — *Dubai.* Fifth time round for this smallish but successful show. *Organiser: Reed Exhibitions, tel 01-661 8752*

26-27: **Britain has IT: Successful Office Automation** — *Cambridge.* Another running of the free PA/DTI "briefing sessions". Comments as for 21-22 October. *Organiser: Information Technology Conferencing, tel 0923 771572*

December 1985

3-4: **Britain has IT: Successful Office Automation** — *Gatwick.* Another running of the free PA/DTI "briefing sessions". Comments as for 21-22 October. *Organiser: Information Technology Conferencing, tel 0923 771572*

3-5: **Computer Communications '85 Asia** — *Singapore.* Conference and smallish exhibition, sounds meaty. *UK contact: Online, tel 01-868 4466*

January 1986

13-16: **Middle East Office Technology/Computer Shows** — *Bahrain.* Fourth time out for this successful two-shows-in-one event. 6,500 visitors last year. *Organiser: Arabian Exhibition Management, tel 01-486 1951* ◆

Back page shorts

Making money

If you have a Times Portfolio card, and if you have any aspirations for its ability to make you rich beyond belief, you're probably getting very depressed comparing your numbers against the FT index every day. That's a task ripe for computerisation; and Jack Palmer's Apricot at Spaceheights will take it on for you — on a no-win no-fee basis. You send him your card(s), address and phone number: he does the checking daily and weekly: and if you win, he calls you and tells you to make the claim (or he'll do it for you). You're honour-bound to send him 15 per cent of your winnings. What could be simpler? He's already got our card ... Spaceheights is on 0305 771974.

OmniReader out?

Poor old Oberon. Despite something like 20,000 sales worldwide, computer show prizes, and near-universal critical acclaim for its £500 OmniReader OCR tablet — including a muted but favourable review in 16 BIT COMPUTING — the company is teetering on the edge of financial oblivion (maybe a review in 16 BIT wasn't such good news after all). Creditors have been asked to defer the dunning letters while Oberon sorts out a rescue plan; main creditor is the US bank that provided the funds for Oberon's ambitious push into the States. Given the 1985 slump in the US micro business, it seems the push wasn't hard enough. And Timex must be starting to feel fated; its Dundee facility, erstwhile manufactory of Sinclair home computers, is/was one of the two plants building OmniReaders. Good luck to them all, anyhow — the OmniReader is a good idea, not a bad product, and cheap to boot.

Winners in the PC stakes for Britain

There were nearly 164,000 personal computers in Britain at the end of last year. Top supplier was IBM with 34 per cent of the market, followed by ACT with 15 per cent (24,200 machines) and Victor third at 12 per cent (19,500 units, but they were worth more than the Apricots). So says market research outfit IDC in its 'Personal Computer Marketplace', a £2,750 tome. Sounds a tadge on the low side, but we wouldn't argue with the proportions — despite ACT's claims during 1984 that it was running neck and neck with IBM. It all depends on what you're counting and how you define a 'personal computer', of course.

... and Europe

In Western Europe generally the 1984 total was 652,100 machines; for 1990 IDC is predicting an installed base of 1,025,000. IBM again lead the field — 37 per cent — with Olivetti second (10 per cent) and Victor a commendable third (8 per cent). ACT clocked up 5 per cent, which also wasn't bad considering it hadn't been selling for long on the Continent. In France, widely regarded as one of the boom areas on the other side of the Channel, IDC shows a total of 110,000 PC-type machines shipped last year; IBM represents just over 26 per cent of installations and Apple leading with nearly 35 per cent. No 3 is Olivetti at six per cent, with Victor rating a mention at 4.1 per cent. The slow-starting Apricot is buried in 'autres' ...

Bargain bytes

Buy two promotional ten-packs of 3M microfloppies and your retailer should give you a freebie Egon Ronay feeder's guide called 'Just A Bite'. Bite, byte -- geddit? 3M's PR people had a great time with this: "most people associated with computers are lean, hungry go-getters ..." and more in the same vein. Still, it's a genuine book that sells for £3.95 in the shops and isn't at all bad; 3M disks are ok, too, and aren't especially expensive.

Add-on 10MB disk

Falcon is a new add-on hard disk for the Apricot with a very competitive price — stores 10MB, "runs under MS-DOS 2.00" (presumably 2.11), can be partitioned into multiple logical drives, "designed to complement Apricot livery" (presumably it's painted more or less the same colour). The price is £1,095 (ACT's own MX10 add-on 10MB unit is a hundred quid more) and you might still be in time to get the £995 launch offer. One of our contributors has a Beta-test version which (predictably enough) came with more than a few bugs — necessitating among other things a redisgn of the interface board. Still, it's reportedly working now; and when it's had a bit of a run in the Real World we'll carry a full review. Meanwhile, for more info the manufacturer is Fraser Associates on 0280 816087.

Maintenance by Apricot

We've always rated ACT's maintenance services, and the charges aren't bad either. The 1 September price list includes four options (two- and one-year terms, taken out at any time or within 14 days of purchase): the worst deal (one year signed after the bargain fortnight) includes £240 for a twin-315KB-disk Apricot PC, the best (two years signed less than 14 days after buying) is £320. Plus VAT, natch. Call 021-541 2161.

Chinal gets Apricot deal

A nice feather in the cap of Chinal Management Services — Apricot Scotland, the manufacturing arm, has taken Chinal's production planning system The Bank for its Glenrothes plant. ◆

Don't forget that changes to NI contributions came into force on 6 October — with increased complexity on the calculations necessitating a substantial update to any payroll packages you might be using. Make sure your software supplier has provided an update for the new NI scales. And if you have Apricot Accountant, remind your dealer that the latest word from Apricot is that the last updating instructions issued were (to put it politely) wrong.