

POPULAR Computing WEEKLY

SPECIAL
supplement
1986
Sept 4-10

AMSTRAD PCWs

INSIDE

VI

Upgrading your 8256 to an 8512 without tears

VIII

**Graphics on the PCW?
No problem with the
Electric Studio lightpen**

X

**Speed and simplicity
are the keynotes of
AnsibleCheck**



XI

**MAP accounts package
offers integration and
flexibility**

It's amazing to see how computer users make the most of any micro available. The Amstrad PCW machines, designed mainly as word processors, are now used for a whole host of business applications based on CP/M software.

Even more surprisingly, the PCWs are coming into their own in the fields of communications, graphics, and, we are told, eventually even music with a MIDI interface reportedly on the way, and other products rumoured.

It seems that these unassuming micros will be the major success of the eighties in the serious home/small business market. But don't be surprised to find PCWs popping up in all sorts of unexpected places after the Personal Computer World Show sees Amstrad consolidating its hold on the market. ◀

PCW comms

DAVID WALLIN ON THE INTERFACES,
MODEMS AND SOFTWARE
YOU WILL NEED

The Amstrad PCW 8256 and 8512 are very powerful computers, but when it comes to comms., they lack one vital piece of hardware - a serial port. Getting a serial port is no longer a problem; I use the Modem House VPCS 8256/8512.

Also available with Centronics parallel ports as well as RS 232 serial are the Amstrad CPS 8256, at £59.95; the VPCS 8256/8512 at £63.25, which comes free with Voyager II and Comm+ software; and the KDS Electronics at £60.95.

All the interfaces are just about the same, so I'd advise getting either the cheapest one, or the one recommended for use with your modem (eg. the VPCS for use with a Voyager II modem. I use a Voyager II/VPCS and COMM+ software package.)

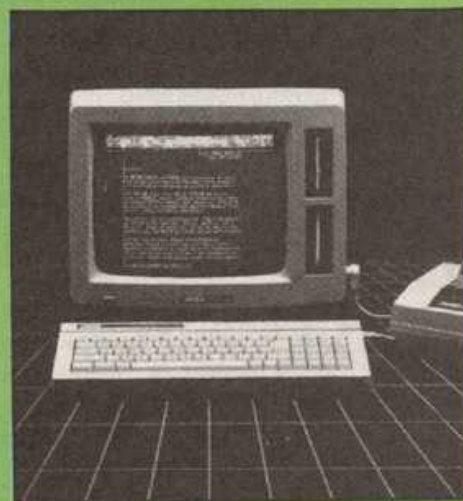
The PCW 8256/8512 comes with some very simple communications software. This is on side one of your system disc (Locoscript side) and is called Mail232. If you put your Locoscript disc in on side 1

and type DIR (return), you won't see it in the directory! To see it you must type DIRS (return). The actual file is called MAIL232.COM (if it's not there, contact Amstrad and they should be able to supply you with a copy). Mail232 is a CP/M program, to use it you must first load up CP/M (side 2 of your system disc in drive A, turn on computer or reset), then type MAIL232 (return). When you load up Mail232, you have four options, one for each function key - f1: Protocol and handshaking; f3: File transfer; f5: Online/Offline; f7: Z19/VT52 emulator or exit to CP/M.

I have not actually seen any good documentation on the Mail232 program, all supplied instructions with interfaces, rate from poor to worse. In fact this is the case with most communications documentation, especially modem instruction manuals. I sometimes use Mail232 to communicate with an intelligent modem when I just want to

quickly log on to Telecom Gold or something. If I intend to do any real communicating, I use a proper piece of software.

COMM+ is the program I use most of the time, and, contrary to most other reviews, I find it both easy to use and powerful. Other reviews have all stated how hard it is for a beginner to get started with COMM+, this is no longer true as a JCF (see below) is supplied to give a simple nine-number directory. With this JCF, you need never do more than just



press a key, but if you want you can delve deep into the program and make the most of its many features. ▶

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PLEASE NOTE: EASY LABELLER IS A PURPOSE DESIGNED PROGRAM AND NOT A DATA BASE ADAPTION. THE NEED TO DEAL WITH CP/M AND DISC FILES IS NOT REQUIRED.

A JCF is a Job Control File. Basically, COMM+ has an internal language; programs created under the COMM+ language are called JCFs. The manual has a very good section on creating JCFs, and even newcomers to computers should be writing JCFs of their own very quickly. There are lots of examples of different JCFs for different jobs which can easily be converted to your own specific requirements.

COMM+ supports file-transfer (up and downloading) extremely well. It has simple and advanced XMODEM, MODEM 4, and 8-bit CRC error checking (even on 7-bit communications). That sounds complicated, but is very simple to use.

Incoming data can be sent directly to memory for later saving on disc, or directly to a printer, or both. There is no SPOOL facility though. SPOOLing is where incoming data goes directly to disc as well as the VDU. With COMM+, you must first get the data into memory and then save the memory contents to the disc.

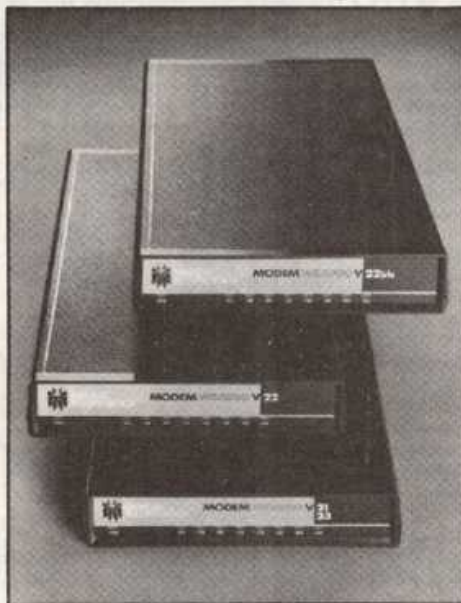
Other features on COMM+ include six different emulations (ANSI, Viewdata, ADDS, ADM3, Hazeltine and VT-5), auto linefeeds, programmable user keys, restoring of deleted memory, three duplexes (Full, Half and Host (provide echo back to other computer) and more. Overall, COMM+ is extremely powerful, but it may put off the inexperienced computer users as it is all very 'technical'. The manual is a brilliant 246 pages long and contains some humour (if you open it upside down, the back page is upside down, and points this out to you!).

Information

Chit-Chat is simpler to get into than COMM+, but has nothing like its power. Comparing the TASK (Chit-Chat language) facility to the JCF facility is like comparing a ZX81 to an Amiga or a VW Beetle to a Ferrari. The tasks can get information, send information, and that's about it!

Where Chit-Chat does beat COMM+ is in the ease of use for the beginner. It has an in-built phone directory and comes with about 30 numbers, including MicroLink, EasyLink, One-to-One, some BBs and other services. Auto-logon strings (your computer sends your id, password etc. to the other computer at the correct time) are fully supported.

The software comes with auto-dial routines for the following modems: Thorn EMI VX543, DACOM DSL2123AD, Master Systems MS2123AD and Hayes compatible modems. There is also a chapter on writing auto-diallers for other modems. I tried quite a few times to get a V25bis auto-dial routine written for use with my Tandata Tm512 modem, but I was totally



unsuccessful each time. Naturally, manual-dial modems can also be used.

Of the two programs, COMM+ is the more powerful, complicated, versatile and cheaper one, and is the one I'd advise people to use.

The history of how UKM7 developed could take a couple of pages to print (in another magazine it did!), but simply, it's an old American program converted to work on British CP/M micros. An installed version for the 8256/8512 is available and called 8256UKM7. UKM7 is public domain and therefore it's free!

It is available from some CP/M user groups, PDsigs (Public Domain software interest groups) and some Bulletin Boards including CBBS SW (0392-53116, 8N1, 300, 1200/75 and 1200/75 viewdata). I've never actually used the program, but from what I've heard it is very good.

I've discussed interfaces above, but there's also the need for a modem. Any intelligent modem will work with either of the above programs (though I was unable to use a Tandata Tm512 with Chit-Chat). Probably the best cheap intelligent modem around is the WS4000 from Miracle Technology. For the richer people out there, there is also the WS3000 range and Pace's Series 4 range. The two above software packages also have their own modems that they can work with, COMM+'s Voyager II and Chit-Chat's Sage Modem.

Autodial

The Voyager II modem is a good quality, autodial/answer modem. It has baud rates of 1200/1200, 1200/75, 75/1200 and 300/300. It is fully approved for both PSTN and PABX use (BT phone lines and switchboard).

It has five LEDs on the front: Power, DIR, RD, TD and Carrier. The baud rate is selected by turning a knob on the front of

the modem to the desired speed or to the test mode. On the back there is a standard RS 232 D interface, a telephone connection lead and a mains lead.

The modem is simple to use, and works very well with COMM+.

The Sage Modem is neither auto dial or answer, only has 300/300 and 1200/75 baud and speed selecting is awkward.

There are three push in-out buttons on the front and one on the back for selecting test mode on/off. One of the ones on the front is a connect switch, pressed to tell the modem to take over the line. The other selects the baud rate, both in for 1200/75 and out for 300/300. The connection on the back of the modem is not an RS 232 D, but a DIN plug. My overall opinion of the modem is that it is too expensive and offers too few facilities.

What's the best system for you depends on your wallet. Ideally, a WS3000 or Series 4 modem, COMM+ and Chit-Chat software and any interface. But being realistic and practical I would advise the system I use; a Voyager II, VPCS 8256 and COMM+.

If you have more money, then swap the modem for an intelligent modem such as a WS3000 or 4000 or a Series 4.

E-mail

If when you first bought your computer you didn't even know how to plug it in, and don't know much more than that now, I'd get Chit-Chat, any interface and a WS4000 (a cheap Hayes modem).

If you have a rock bottom budget, use Mail232 software and download 8256UKM7 from CBBS SW.

If you read my weekly page, you should have a good idea of what to use a modem for, anyway. Last week's feature was devoted to Electronic Mail services. For the business user, E-Mail is likely to be the main use of a modem. All the big E-Mail services also allow the sending and receiving of telexes. A telex machine for under £800 (PCW8256, interface, software and modem) is very cheap, as a PCW is also a very powerful computer, you also get the use of Word Processors, Spreadsheets, Databases etc. Not only will Telecom Gold/MicroLink, EasyLink etc. be available to the business user, but also Prestel and some services like the Maplin Electronics Electronic Ordering service.

Home users will get the ability to use Bulletin Boards, MUGs, Prestel and the big E-Mail services. Home users could also set up their own bulletin boards if they wanted to; COMM+'s JCFs are powerful enough to control a BB.

At £229 for COMM+, Voyager II and the VPCS 8256, or £239 for Chit-Chat with a modem, PCW comms needn't be expensive, and can open up a whole new world of use for your Amstrad. ◀

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It was inevitable really, that as there are eight spare chip sockets in the 8256, someone would start offering memory upgrade kits.

Citadel Products was one of the first to do so, with the CP512 kit. 'Kit' is probably the wrong word for its package, which consists simply of eight spare Ram chips. The only additional equipment you should need is a screwdriver and a sheet of aluminium foil to give a static-free surface to work on.

Opening up the back of the machine (there are six crosspoint headed screws at the back of the PCW, four of which are not the most accessible in the world), the spare sockets are immediately obvious below the Ram chips already installed.

Easy upgrade

The upgrade is extremely easy to carry out. No soldering is needed unless you have a very early version of the 8256 which doesn't have the on-off switches at LK1 and LK2 on the circuit board.

It was with a sigh of relief that I found said switch intact on my model. In this case it is simply a matter of switching points B and D to on, and A and C to off.

If you do have an early version, you need the soldering iron, Solderlink between the centre point and A, then cut the link between B and the centre.

Now comes the really fiddly bit -

inserting the chips. As the plastic shielding comes between you and three of the sockets, it's essential to work from that end forwards.

I found the pins on the chips supplied were slightly out of alignment and too wide, so some rather low-tech adjustments were made with the flat side of a ruler and the table top. All the chips went in fairly easily apart from the fourth, which upholds the old adage that if something is going to go wrong, it'll happen at the halfway stage.

From there, refit the back of the PCW's case, switch on, and wait for the magic words *386K Drive M* to appear on the CP/M opening screen.

So, of what use is this extra memory? The answer, frankly, is not a great deal. The memory is only increased on Drive M; it's not going to magically increase your disc capacity, nor decrease the amount which *Locoscript* takes up, nor does it leave any extra memory free for Basic. True, you now have as much as on the 8512, and there are a few 8512 specific software titles, but they tend to take advantage of the second disc drive rather than the additional 256K.

However, if you are already using a second disc drive with your 8265 - with a third party produced interface perhaps - then this expansion will complete the expansion to 8512 status.

Of more immediate use, Citadel also sells the **Radec U512 kit** - the chips plus a second 3 inch disc drive, which again you can fit yourself. The drive has a capacity of one megabyte unformatted and is thus identical to Amstrad's own.

Confidence

Like the chips, the second drive is fairly easy to install. Apart from the inevitable screwdriver, you will also need a small hacksaw to remove the plate on the front of the 8256 (the one which reads Green Monitor, Personal Computer Word Processor, etc). This is done from the inside, sawing delicately through the white plastic lugs which hold the plate in place. The second drive then slots into the gap.

Installing both the chips and the drive is largely a matter of confidence, nimble fingers and knowing what you expect the finished result to look like. However, for anyone who's not keen on doing the job themselves, Citadel has set up a network of dealers who will fit the device, or both devices for the customer. ◀

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Pen is the mightier?

PETER WORLOCK REVIEWS THE LIGHT PEN
AND GRAPHICS SOFTWARE
FROM THE ELECTRIC STUDIO

There was a time, and not so long ago at that, when the idea of graphics on a computer meant a row of asterisks denoting the monthly sales figures.

Things have moved on a bit, and full-colour, high resolution, 3D perspective displays are commonplace. Except on the Amstrad PCWs.

The Electric Studio is doing its bit to change that with the release of a light pen and graphics software package.

The hardware is simple enough - a light pen that looks like a chunky, black felt-tip, connected to an interface by a length of wire.

The interface plugs into the PCW's rear edge connector but considerably doesn't hog the connector for itself. It features a piggyback connector so you can use the light pen together with a modem, plotter or other device that also requires access to the expansion port.

The software is a different kettle of fish with a host of features. Virtually all of the now-standard features of drawing packages are here, and a couple of new ones.

Circles and boxes, filled and unfilled, lines, brushes of varying thickness, fills in a multitude of patterns are available from a main menu.

Third dimension

Among the newer wrinkles are a 3D box facility, where you draw the front face and the program automatically draws the rear face in full perspective.

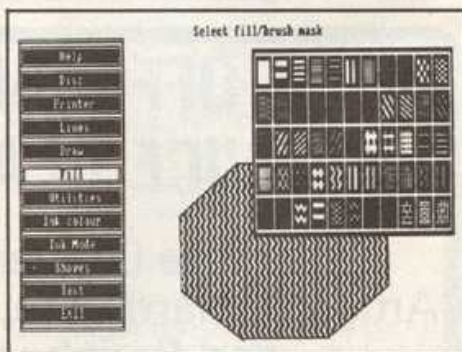
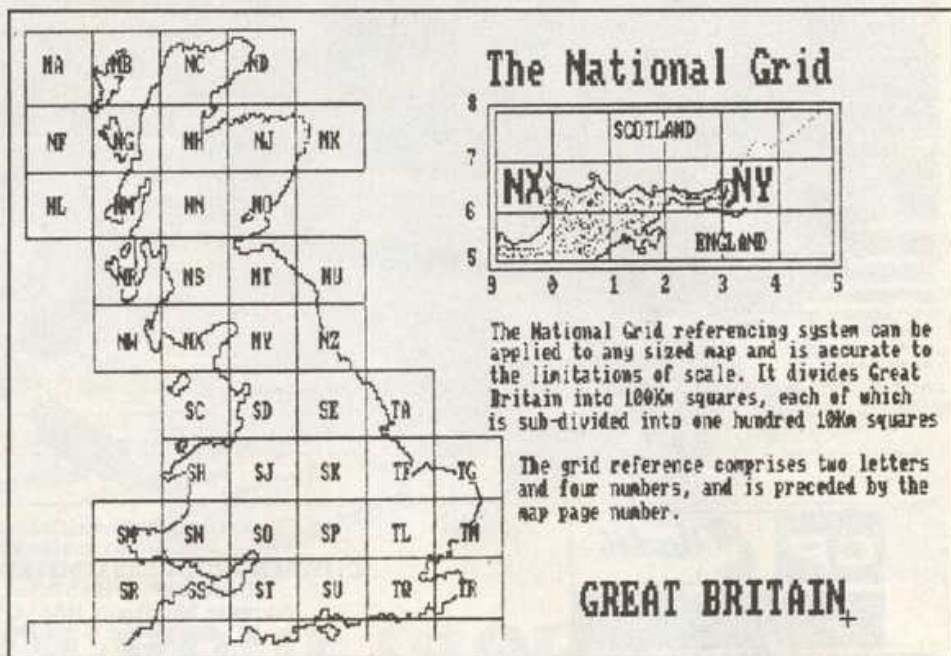
There's also a polygon tool, not new in itself but what is cute is the ability to rotate the polygon before fixing its position.

You can also add text to your drawings, in different sizes and going across, up or down the page.

Finally, there's the invaluable 'zoom' function which allows detailed touching up of your creations.

On the whole, the software works very well but it does suffer from a few limitations, especially in comparison to some recent graphics packages on other machines.

First and foremost are the problems associated with the light pen. A couple of years ago, light pens were the devices of choice for graphics work. The Electric Studio itself says, "A light pen is, without doubt, the most cost-effective and



efficient means of producing artwork on a computer."

Frankly, this is a load of nonsense. Better by far is a graphics tablet, and even a mouse is more comfortable and versatile.

The light pen ties up both hands: one to hold the pen against the screen - which can get very tiring - and the other to operate the keyboard for selecting functions and confirming actions.

Although it is possible to get pixel accuracy with the pen, it's not easy to do so since you have to keep your hand rigid against the screen and this can lead to some odd positioning of head and arm as you crane to see behind the pen hand.

The software is not flawless either. The most notable omissions concern correcting mistakes. There's no eraser tool, forcing you to change ink colour and then draw over the offending items.

There is an 'undo' function of sorts which will delete all actions since the last menu access, or since the design was last saved. This is rather buried in the documentation, though, as are some other functions, so a close read of the manual is needed.

There's also a problem when working close to the edge of the screen. Because of screen wraparound, the cursor has a tendency to bounce from one side of the screen to the other. Very irritating.

All in all, The Electric Studio package is a capable product. ◀

Product: Light pen & software
Micro: Amstrad PCW 8256/8512
Price: £79.95

Supplier: The Electric Studio, 13 The Business Centre, Avenue One, Letchworth Garden City, Herts SG6 2HB.

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Greasing the Ansible

PETER WORLOCK DISCOVERS WHAT TWO
S.F. WRITERS CAN PRODUCE TO HELP
STRUGGLING USERS OF LOCOSCRIPT

The apparent obsession of some reviewers with word count facilities may bemuse non-professional writers. Surely it's quality, not quantity, that counts.

However, there are two reasons why the quantity is important. First, most publications pay by the word so it's nice to know how much you've got coming.

Second, most publications allocate space by words - a writer may be commissioned for 2,000 words. If the final article is substantially longer or shorter than that, the author is likely to become the object of a production editor's fury.

So one of the drawbacks of *Locoscript* as a tool for professional writers is that it doesn't have a word count facility.

Two professional authors - Christopher Priest and David Langford - have set out to remedy that with a program under the unlikely name of *AnsibleCheck*.

It's a stand-alone utility running under CP/M, and it performs two functions; a straightforward word count, and a repetition check. The latter looks for words that have been typed twice, one immediately after the other. A common problem, say Messrs Langford and Priest, and one that's difficult to spot on a monitor.

After saving your *Locoscript* file, you insert your *AnsibleCheck* disc and reboot. You'll probably find that PIPing the programs to the RAM disc is easier and eliminates disc swapping.

When run, *AnsibleCheck* asks for a filename and does its business. Wonders of wonders, it reads files from any *Locoscript* group, not just group 0, although you won't be able to get a directory of files in other groups because

A	21	THE	26	AND	13
IS	9	OF	9	THAT	8
TO	8	WORD	8	ANSIBLECHECK	7
IN	7	IT	7	FOR	5
YOUR	5	DISC	4	DOES	4
GREASE	4	HAVE	4	ONE	4
WORDS	4	YOU	4	AM	4
BY	3	COUNT	3	FILES	3
FROM	3	IT'S	3	ITS	3
LOCOSCRIPT	3	MOST	3	ON	3
OTHER	3	PROFESSIONAL	3	PROGRAM	3
SO	3	TWO	3	WHICH	3
WILL	3	WITH	3	AFTER	3
ANSIBLE	3	ANY	3	AS	3
AT	3	AUTHOR	3	BE	3
CP	3	DOESN'T	3	FIND	3
FLAWLESSLY	3	GROUP	3	HAS	3
IF	3	INFORMATION	3	JOB	3
JUST	3	LANGFORD	3	LIKE	3
N	3	MAY	3	NAME	3
NOT	3	PRIEST	3	PUBLICATIONS	3
QUANTITY	3	RE	3	REASONABLE	3
SHOULD	3	SPELLING	3	THAT'S	3
THEM	3	UNDER	3	UTILITY	3
VALUE	3	WAS	3	WRITE	3
WRITERS	3	ABLE	3	ABOUT	3
ALLOCATE	3	ALONE	3	ALTHOUGH	3
AMONG	3	AMSTRAD	3	AMUSING	3
ANALYSED	3	APART	3	APPARENT	3
APPARENTLY	3	ARE	3	ARTICLE	3
	1		1		1

Press a key to continue. EXIT to return to menu:

```
AnsibleCheck analysis of text file A:SPELLER.SUP
Estimated word count: 485
Number of text pages read: 5
Average words per page: 97
Number of repetitions noted: 0
```

CP/M doesn't recognise them.

As a bonus, the disc contains a diverting little program called *Grease*. The name is derived, apparently, from a story in which an author has his entire output analysed by computer which reveals that the word he used most frequently was "grease".

Thereafter the poor sod was unable to

write a single sentence without the word "grease" in it.

And that's just what *Grease* does - it tells you the frequency of words in your documents.

It's more than just a little bonus.

Apart from being an amusing recreation, greasing your files has one very useful aspect. It will reveal a lot about your writing style. For instance, if any word of the flannel variety (like personally, fundamentally, obviously, and so on) crops up a dozen times in a hundred word document, you should realise a re-write is in order.

Civil servants should find it especially helpful.

Ansible Information will have other writer's utilities available in the future, among them an indexing utility.

On which subject, I'd like to see a spelling checker that will work with *AnsibleCheck*.

At £19.95, *AnsibleCheck* is reasonable value and does its job flawlessly. ◀

```
AnsibleGrease analysis of text file
Estimated word count:
Unique words counted:
```

```
A:SPELLER.SUP
474
265
```

Options

```
A display alphabetic word list
F display list in order of frequency
L change minimum displayed frequency:
M change maximum displayed frequency:
N toggle output destination:
EXIT abandon the program
```

```
1
21
SCREEN
```

Program: *AnsibleCheck*

Micro: Amstrad PCW 8256/8512

Supplier: Ansible Information, 94 London Road, Reading, Berkshire RG1 5AU.

Account for yourself

EDWARD LODGE TAKES A LOOK AT
THE MAP PACKAGE, WHICH IS TAILORED
FOR SMALL BUSINESS USE

From the very launch of the PCW, it was obvious that although it was being sold primarily as a word processor it was potentially capable of fulfilling many other office needs at the same time. If only the software was available.

This is where the advantage of being a CP/M system came into its own. CP/M was the main business operating system until the advent of MS-DOS, and so a large pool of tried and tested software was available for the Joyce, which only needed minor changes to become fully fledged 8256/8512 products. Such as the **MAP Integrated Accounting Suite**.

Suite

This suite of programs, consisting of a Sales Ledger, Purchase Ledger, Nominal Ledger and Stock Control programs, is definitely not a home accounts package. It is a professional business accounting tool that small businesses who already own a PCW, but have not yet computerised their accounts, will certainly find of interest.

For those not familiar with accounting terms, a Sales Ledger is where you mark down your sales (got it so far?) - although there is the added problem of Credit Control and so on - and a Purchase Ledger is used to keep track of purchases... who you bought the goods from, when they need paying, etc. A Nominal Ledger is a slightly more complex beast, being a record that

THE MAP GROUP			
Nominal Ledger		Date: 31.12.83	
Page: 1			
TRADING ACCOUNT			
For Period Ending 31.12.83			
PERIOD TO DATE		YEAR TO DATE	
SALES AND SERVICES (C)			
SALES ACCOUNT 1	121618.95	121618.95	
SALES ACCOUNT 2	22451.10	22451.10	
SALES ACCOUNT 3	8892.89	8892.89	
SALES ACCOUNT 4	13351.06	13351.06	
SALES ACCOUNT 5	3028.88	3028.88	
SALES ACCOUNT 6	8441.22	8441.22	
SALES ACCOUNT 7	57.50	57.50	
DISCOUNTS GIVEN	15.45	15.45	
	686.29	686.29	
	184425.94	184425.94	
OPENING STOCK (C)			
	0.00	0.00	
PURCHASES (C)			
MATERIALS	88875.17	88875.17	
SUBCONTRACTS	38730.82	38730.82	
PURCHASE ACCOUNT 1	4828.13	4828.13	
PURCHASE ACCOUNT 2	8065.23	8065.23	
PURCHASE ACCOUNT 3	2347.53	2347.53	
PURCHASE ACCOUNT 4	3472.98	3472.98	
SUPPLY TRADING EXP	514.90	514.90	
DISCOUNTS RECEIVED	17.68	17.68	
	1283.88	1283.88	
	118213.32	118213.32	
CLOSING STOCK (C)			
STOCK 1	5000.00	5000.00	
	5000.00	5000.00	
	83210.82	83210.82	

summarises all the financial transactions of a company.

Naturally, the Nominal Ledger encompasses aspects of the first two - so with manual systems, more than one entry must be made. However, if you use an Integrated system, such as this one, entries made in the Sales and Purchase Ledgers are automatically logged into the pertinent section of the Nominal Ledger.

This cuts out the problem of reconciling one set of accounts with another - most often caused by human error putting down differing entries when transferring figures from one ledger to another. Although the three modules can be used as stand alone programs, maximum benefit comes with using all three.

System

The package comes as two program disks (single sided, one on each side) - and all the data files are held on a separate disk. It has to be said that this is a program that is going to be pretty laborious to use with a single drive system; specifically you might find yourself coming up against lack of space on your data disk. Using a two drive system, the single data disk in drive B can store enough to satisfy most small businesses.

Initialisation (the setting up of account files, stock levels, etc) is done using a separate program for each section of the package, but all the files are held on the single disk, so 'multiple entry' requires no

changing of disks.

Perhaps the most useful thing a computer ledger will do for you is, not only keep record of the various transactions, but act upon them.

Thus, customer invoices, statements and the like can be printed up by the system - all you need is the correct stationery which MAP can provide. Without going into details, the ledger seems to have all the standard features, plus a few others, such as variable VAT rates and flexible accounting periods.

Purchase

Likewise, the Purchase Ledger keeps records of and will advise you of the various outgoings of the business and automatically prints out remittance advices and cheques.

As mentioned before, the Nominal Ledger is fully integrated with the previous two ledgers - with entries being posted automatically. Full trading accounts, balance sheets, and profit and loss sheets - everything the average accountant would want.

Stock Control

Stock control is usually one of the biggest headaches for any business, and a decent program is worth its weight in gold. Minimum stock levels and re-order levels can be set - so at any one time, the program will report which items need re-ordering, and how much it will cost.

Throughout, this is a very professionally put together package, with much of the system under menu control. Security is not overlooked, with user defined passwords often needed to access parts of each program.

No-one is suggesting that you rush out and blow your £149 on this package straight away - but if you are thinking about computerising your accounts with a PCW, this system has many features that will interest you and is excellent value for money. ◀

Program: Integrating Accounting Suite

Micro: Amstrad PCW 8256/8512

Price: £149 (or £49 each)

Supplier: MAP Computer Systems,
105-107 Windsor Road, Oldham OL8 1RP.
Tel 061-624 5662

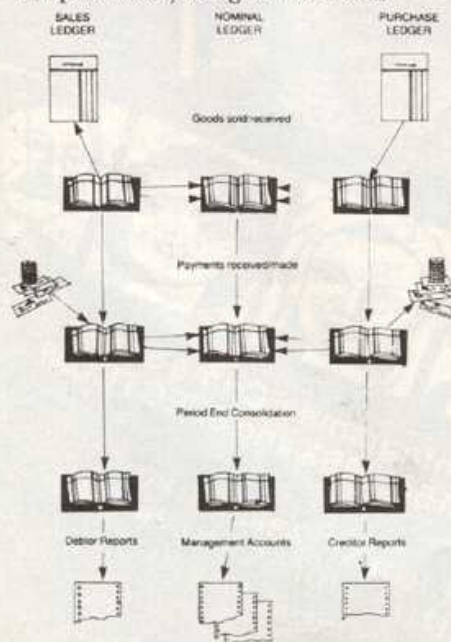


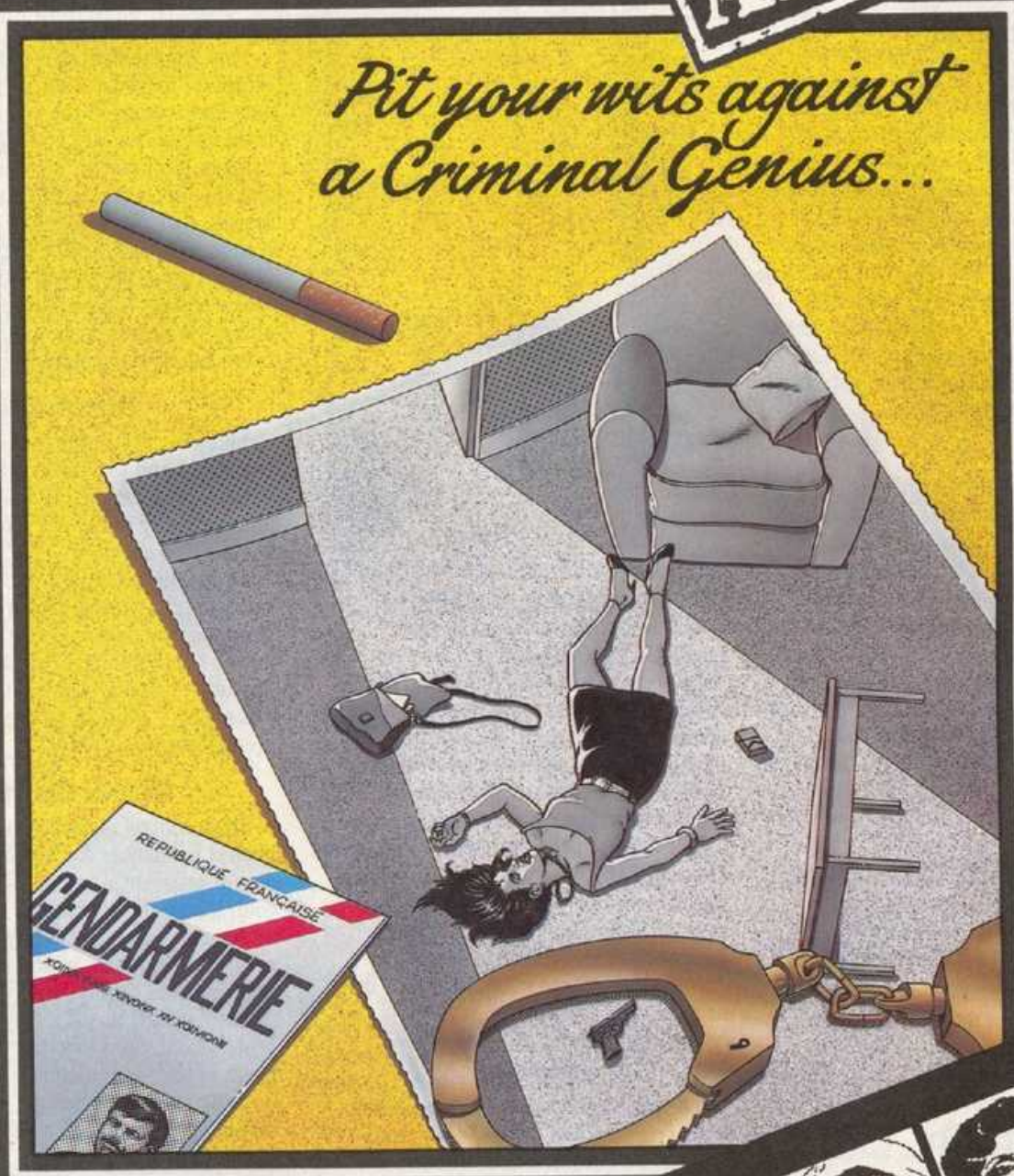
Fig. 4 Sales, Purchase and Nominal Ledgers - Overview

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