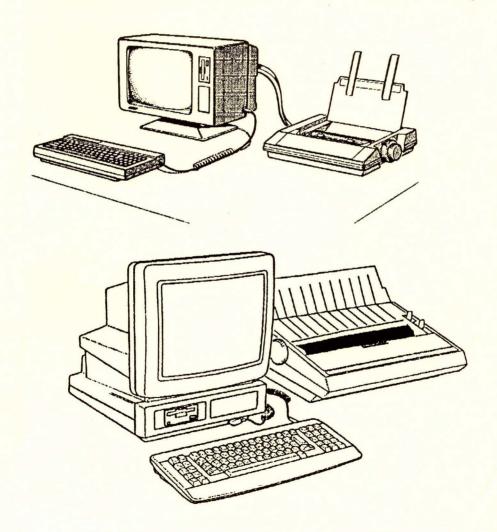
The PCW Club NEWSLETTER



Number 88 January 2003

From PCW to PC

by Mike Elliston

The most frequently asked question received here at PCW Towers of late is "How do I move all of my stuff from the PCW to a PC?". There are two main ways available to you: by cable or by disc.

CABLE

Your files can be transferred from the PCW to the PC via a cable linking the two computers, both running a communications program. I have successfully used the MiniOffice Comms program running on a PCW and the PC version on a PC, linked with a Null Modem cable (not just a simple cable). Alternatively a simple cable with a Null Modem connector at one end will do.

You can also use Mail232.Com (which comes free on your PCW Master discs) and Mode.Com on the PC as long as the PC is running DOS. There are a number of other programs available but the principle is identical: you set the communications parameters on the two machines the same and send the file from a disc in a drive on the PCW to a disc in a drive on the PC.

These cables are Serial cables and you need to have a CPS8256 or similar interface attached to the expansion slot at the rear of your PCW to provide a 25D Serial port on your PCW; almost every PC will have a serial port fitted as standard.

This cable and communications method is the only option available if you have just 3" drives unless you can get data copied onto 3.5" discs by someone who has both 3" and 3.5" drives on their PCW. It is possible to fit a PCW 3" disc drive onto a

PC (the way some professional companies used to do it) but you really need to know what you are doing before you try it!

LocoLink

The specialist LocoLink kit is still available from LocoScript and comes with both a short cable and program discs (including a Windows version) for both machines. This cable plugs straight into the expansion slot onto your PCW and the other end into the parallel printer port on the PC. This is an excellent product and may be all you need. Obviously you must be running Windows on the PC to run the Windows LocoLink program.

Never connect or disconnect any cable, printer or other attachment to or from your PCW while it is plugged into the mains! You will only do it once.

DISCS

Now PCW files and data can be stored on a variety of discs. The A: drive on the 8000 series is a 3" CF2 disc with up to 180k of data on each side; the disc has to be turned over to read the other side.

The A: drive on the original 9512 series and the B: drive on an 8512 is a 3" CF2DD storing up to 720k of data on one side only.

There were 5.25" drives available but I shall ignore these. As they held only 180k you will have to treat these as if they were 3" drives above.

On the more recent PCWs 3.5" drives became available for either the A: or B: on both the 8000 and 9000 series. The rare 180k 3.5" A: drive for the 8000 must be treated as if it were a 3" CF2 above.

Please note that we are only talking about data discs not programs. There is absolutely no point in copying any CP/M programs onto a PC. Running them will almost certainly hang your new PC and may well damage it too.

Some simple BASIC programs may run on a PC but you need to be careful about the instructions you are making; what effect will they have on the PC? Try using LocoScript Mallard Basic or GW Basic on your PC with programs from a PCW.

Other than BASIC routines don't copy anything onto the PC that you didn't write yourself. You can transfer MDAs and CUTs that you have drawn but not MDF fonts created in Font and Shade Designer. MicroDesign Area files, MDAs and CUTs, can be converted to PCX or TIF or similar graphics files on the PC using ViewPoint if you own a copy but unfortunately it is no longer available for sale.

LocoFile .DAT files, User dictionaries, and Templates are generally OK if you are moving to LocoScript Professional on the PC; otherwise they are useless.

Floppy Discs

On the PC files are usually stored on a hard disc in folders or directories (like user groups) and on floppies. Floppy discs are usually 3.5" HD (1.44 Mb) or the rarer DD (720k) and even floppy discs are being superseded by CDs and Zip drives on recent PCs. Earlier PCs can also access 5.25" discs of various capacities but these are now so rare as to be ignored.

Moonstone 2 in 1

If you have a 3.5" drive on your PCW life is so much easier. Moonstone's 2in1 program runs on the PCW and is still available from LocoScript. This copies from 3" drives to 3.5" discs whether they are PCW or PC format; it will even format 720k 3.5" discs as PC format allowing them to be read on a PC. (If you are daft enough you can format a 3" disc as 720k PC format too but it will be completely useless!)

You will need to experiment with your PC discs before you start copying lots of files. Very modern PCs may baulk at reading 720k DD 3.5" floppy discs. If this happens try rebooting the PC and reading the 720k DD discs *before* using any 1.44 Mb HD discs. Otherwise you will have to find an earlier PC that is happy with DD floppy discs.

Don't use HD discs on a PCW

You must use 3.5" DD (720k) discs to read from a PCW. Do not try to use HD (1.44 Mb) discs. They will not be reliable and the PC may well try to format them, along with all your precious files, when you put them in it's floppy drive.

Can I use the simile of a record player? If you put a LP onto an old 78 phonograph it would probably work for a few times but after a while it would fail to play properly. It's the same with using HD discs on a PCW. They may format as a 720k disc and store your files for a little while but they will soon fail, taking your data with them. Don't use HD 3.5" discs (supplied with two square holes and marked with the HD symbol) on your PCW – 720k DD discs are still available if you look around. See our advertisers for details—they have 3" too.

Using Moonstone's 2in1 on the PCW

Load CP/M (not LocoScript) and then load and run the 2in1 program. You will be presented with four boxes on the screen. The arrangement depends upon the configuration and the machine but the top left is always the instructions. On a PCW 8512 the top right box is the A: drive, the bottom right is the B: drive and the bottom left shows the files on the M: drive. The program can only copy onto 3.5" discs if one of the drives is a 3.5" drive.

You can either format the PC 3.5" discs on the intended PC or in the 3.5" drive on the PCW using F for Format Disc and selecting MS/PC DOS. Experiment with reading this DOS disc on your PC before you copy too many files.

Put a 3" data disc in the 3" drive and a formatted blank PC disc in the 3.5" drive. Use the **Tab** key to move the cursor from one box to the next. Press L to log each disc when the cursor is in its window. Use [+] and [-] to Tag the required files on the 3" disc and C to copy all the tagged files from the 3" PCW disc to the 3.5" PC disc. Remember to Log the discs again after you have done copying files to see how much space has been used on the destination disc.

Note that CP/M discs have 16 user groups; these appear as groups 0 to 7 in LocoScript whilst groups 8 to 15 are the Limbo areas in in LocoScript. However PC discs have sub-directories (sometimes called folders) instead. Note that 2in1 can not access sub-directories on a PC disc so don't create them if you choose to format your DOS discs on a PC. 2in1 can only copy to the root (equivalent to group 0) on a PC DD disc. Don't even think about using HD discs-they'll fail.

Repeat copying PCW files until the PC disc is nearly full. A 3.5" disc can hold as much as four 3" CF2 discs but make sure that you do not copy over files of the same name or they will overwrite one another. Do not copy any files from the Limbo groups 8-15 from a LocoScript; they have been superseded by later files in 0-7. Do not copy any .GRP files to PC disc; they are empty and will only waste space. Do not copy any .Sub, .COM, Bin, Hex, LX font files or other CP/M or LocoScript program files to a PC disc.

Please do not bother with letters more than a year or so old; they will be a waste of space. Simply print them out and keep a paper copy. Remember that a 1k letter on your PCW will occupy 32k on your PC hard disc (because that is the minimum size of a file on a PC!).

Don't overwrite files

Be very careful of overwriting an earlier file of the same name. Go through your PCW discs to make sure all the filenames are unique. If you have lots of files named Document.001 then you have a problem! You are recommended to rename all your files sensibly before copying them to a DOS disc. Once you have copied a set of data insert the DOS disc into the floppy disc drive on your PC and use Copy (in DOS) or Explorer (in Windows) to copy them to the hard drive in the PC. Note that Windows programs usually expect to find your data in subdirectories (or folders) called My Documents so it is best to copy files there so you can find them more easily later. If you like you can create a new folder under My Documents called, say, PCWstuff and put your files there until you edit them with Windows programs.

Using PCW.exe on the PC

PCW.exe came with the ViewPoint suite from Creative Technology—it is no longer for sale but it is still copyright and it is still illegal to borrow a copy off a mate.

Create a sub-directory or folder on C: with a name like C:\Pcwstuff to copy your files to. Note that the other program which runs on the PC prefers a folder called C:\LocoDocs.

Put your PCW CF2DD 3.5" data disc (720k only) into the PC floppy drive and start PCW.exe running. You will be presented with the options List and Copy to List the files on your PCW disc and to Copy them onto your hard disc. Specify C:\PcwStuff as the place to store them. Note that they can be copied to another floppy disc only if a B: drive is fitted.

PCW.exe can read and copy all 16 user groups at once. Don't copy all user groups at once onto the PC or you may well overwrite files of the same name. List 1 and Copy 1, then L2, C2 etc. Do not copy any files from groups 8-15 (Limbo) on a Loco-Script disc. See above for sensible file naming procedures to prevent overwriting.

The one distinct advantage of using PCW.exe is that it can can copy both to and from PCW and PC discs. If you don't have a copy of PCW.exe you'll have to find someone who uses it.

Using CPM.exe on the PC

CPM.exe can be downloaded free from the Internet or is available from a number of sources. It also comes free with the Allink suite from Ansible (the same as produced Ansible Index which some may remember from the past). CPM.exe is not quite as user friendly as PCW.exe but it is still available. In particular is has the ability to convert correctly formatted blank 3.5" DD DOS discs to a CF2DD format (but these can not be used as start of day discs, only for data storage). It can only copy from PCW discs to a PC disc drive and not vice versa.

Run CPM.exe and you are presented with two columns, the left for the PCW disc, the right for the PC. The options are fairly obvious and a help document comes with the program.

Please note that both PCW.exe and CPM.exe are DOS programs and should be run from DOS. They do not run successfully in Windows.

In addition you need a PC with a disc drive that reads and writes to DD discs; see above. Very modern PCs expect only HD discs and may not work with CF2DDs.

I repeat: do not copy CP/M programs onto your PC. If you try and run a PCW program on your PC you can do serious damage; it will almost certainly hang. The one exception to this is if you intend to run the CP/M program on the Joyce emulator running on the PC. You must only copy DATa files, letters, reports and documents you created.

Spreadsheets

Besides text files you can also use one or two other files on PC: Supercalc 2 .CAL files will import into SuperCalc on the PC. If you wish to use them in other PC spreadsheets use SDI to export them to CSV (Comma Separated Variables) files on the PCW first which most PC spreadsheets will import. [System Data Interchange comes free on the SuperCalc master discs.]

MicroDesign files

MicroDesign .MDAs and CUTs, can be used on the PC once they have been converted to .PCX or .BMP, etc, using ViewPoint; see below. Unfortunately you can not use .MDFs that came with MicroDesign or you created in Font and Shade Designer.

However there is a way around this. Either in MicroDesign on your PCW or in the Joyce emulator on your PC set the lettering you want (in your chosen .MDF) and save it as an MDA. Once you have copied this onto your PC you can use ViewPoint to convert the MDA to a PCX, BMP or other PC graphic file which your PC program will accept.

It is worth noting that LocoScript Professional on the PC will accept PCX pictures in exactly the same way that LocoScript 4 on the PCW uses MDAs.

Database files

Database files in .DBF format from dBaseII can also be used on PC in a number of PC database programs. There is also a version of MasterFile for the PC still available. You may wish to export .DBF data as .TXT output from a dBaseII report. This TXT file can then be imported into a PC database; read the Help file first.

Protext, NewWord and MiniOffice text files can be imported into Word for Windows but need they will need editing. Treat MD3 Editor text files as ASCII (text) files.

Text files

Please do not expect any files typed on a PCW (in any program) to appear in a PC wordprocessor document in exactly the same form as it came out on your PCW printer! You will have some editing to do. It is probably best to set up a template on the PC for the paper size, page setup, font size, margins, etc that you want and save it. Then import each of your text files into a New blank document, rather than trying to edit your old PCW documents.

LocoScript files

Most readers will want to copy Loco-Script files on to a PC and be able to use them without learning a new PC program. There are two programs that fit the bill and will run on a PC and read and understand LocoScript files:

LocoEasy is a simple program for the PC, rather like Loco1 or Loco2 on the PCW. It is a little limited and only prints in "dot matrix" fonts. LocoScript Professional is far superior and highly recommended to anyone who is already familiar with LocoScript on a PCW. Loco Pro falls between LS3 and LS4. It will read LS3 or earlier files but not LS4 documents.

If you use LS4 for most things on your PCW it is better to convert all your files to the LS3 format from inside LS4 before continuing! As I said above, do not expect to replicate your PCW pages on the PC. The fonts, the font sizes, the printer resolution, so many other factors will differ. You are only interested in getting the words across and then relaying them to a new template.

Picture files

Loco Pro will not recognise any MDAs used in your LS4 files. Whilst the MDAs must be available when the LS4 file is printed they are not stored in the LS4 file.

This means that unless you copy the MDAs across too they will not appear in the new file. They must also be copied and then be converted to PCX with ViewPoint first. Only then can the picture file, in its new PCX guise, be imported into the Loco Pro document. However there is the distinct benefit that LocoPro enables you to adjust the size of the picture much more flexibly than you can in IS4.

Remember that *small* MDAs (or CUTs) when enlarged may appear very jagged. In addition if you convert PCXs (or similar) back to MDA to use them in MicroDesign you are limited by the size of the MD page; too big and they will fail to load.

The standard version of Loco Pro only prints in monochrome but see the separate article on the new Colour Option from SD MicroSystems which adds colour printing to LocoScript Professional on a PC.

LocoScript Professional

LocoScript Professional is by far the best program to use on a PC for anyone who is quite familiar with LocoScript on the PCW. It comes on a ready to install CD from SD MicroSystems with or without a printed manual. You will probably find it very easy to use from the start. If you own Loco Pro then you easily edit your LocoScript files directly. Alternatively you can use Loco Pro to convert them for use in Word for Windows if someone specifies that is the format they require, as follows:

Converting for WinWord

Ensure that all your PCW LocoScript files have the extension LS1, LS2 or LS3, based on the version of LocoScript in use; you will see why this is necessary below.

Your files must be named something like Chapter1.LS3 or Chap_10.LS2. Files such as Document.001 will make no sense after conversion.

Copy all the PCW LS files onto the PC into C:\PcwStuff using one of the above methods. Run LocoScript Professional and select the PcwStuff folder. Edit the first file, say, Chapter1.LS3 and immediately save it as Chapter1.LSP. LocoPro must edit and save each file in its own format first, hence the extension .LSP.

This only takes a few moments per file but it is essential. Do not save it with the original name or you will overwrite the original file and may lose the information. I suggest that you save the new .LSP files in the C:\PcwStuff folder also.

Now you have to prepare these new files in a form which WinWord will understand. Again this only takes a few moments for each file. In the Disc Manager screen place the cursor over Chapter1.LSP, Press f9, and choose the option Export Document, select Type and cursor down to the bottom WordPerfect file. Save this WordPerfect file with the name Chapter1.WP in the folder C:\My Documents.

You will quickly learn how to use f4, Quick and End to switch between the two folders PcwStuff and My Documents. Word for Windows expects to find its files in My Documents so save your .WP Word-Perfect files there where Word will find them.

Please note that it is essential to save the three different files in use with their three different extensions, namely Chapter1.LS3 (from the PCW), Chapter1.LSP (in Loco Pro) and Chapter1.WP (the WordPerfect version) in order to distinguish them. It is not as difficult as it may sound once you have done one or two file conversions.

When done with converting a batch of LocoScript PCW files to WordPerfect WP files in Loco Pro, select f10 to exit Loco Pro and open Word for Windows.

In Word, click File, Open, and select the Filetype *.*. It is important that you choose all files (*.*) to view or Word will only display its own .Doc files. Select the file named Chapter1.WP and press Enter. Word will ask: Open WordPerfect type file? Click OK. Once the file appears click File and then Save As to save it as a Word Document which will have the extension .DOC (the standard for Word).

The font will probably be Courier if you've used a fixed pitch font on your PCW, usual in Loco 1 and Loco 2. This you can now change to your chosen font and point size as you wish. Please note that pound signs, fractions and other special characters will need conversion by hand.

When, and only when, you are have saved your file as Chapter1.DOC in Word can you delete the previous versions, LS3 and LSP in C:\PcwStuff and WP in My Documents using Windows Explorer.

Rich Text Format

LocoScript used to sell a CP/M program called RTF.Com which ran on a PCW. This converted LS1 and LS2 files to Rich Text Format (.RTF) files on a PCW disc. Rich Text Format is a standard whereby many of the Bold, Italic, Underline and Centre codes are held with the text. These RTF files, when copied onto a PC disc, can be read by a number of PC programs and imported directly into PC word processors. Once in a PC program, eg WinWord, some editing is necessary but it is a lot easier than copying across all the codes from a printed copy into a plain text file.

Note that as LS1 and LS2 used only fixed pitch fonts WinWord assumes that the font in use is Courier. This can easily be relaid in a proportional font like Times.

Ansible's Allink program

Ansible sells a Windows 9x program called AlLink which converts PCW Loco-Script documents to Rich Text Format files with the RTF extension by default. This program has the advantage that it will convert all the files in a directory or folder from LocoScript to RTF and give them the RTF extension automatically. This means that if all your files still have names like Document.001 to Document.099 you will end up with just one file, the last one, with the name Document.RTF, because each converted document overwrote the last!

This is not the fault of the Allink program—it's another very good reason for giving all your files proper names before you start. The only complaint I've heard of this program is that it does not always recognise correctly the CEntre codes.

If you have used spaces instead of codes or tabs to lay out all your documents then no conversion program is going to get the layout right!

ASCII files

If all else fails all PC programs, Windows or Dos, will read and import an ASCII file. ASCII means American Standard Code of Information Exchange. An ASCII file contains only the simple alphabetic, numeric and basic punctuation characters as you would get on a typewritten document. It does not contain any formatting codes like bold, italic or centre.

In particular note that your pound sign will appear as the hash symbol (#) and that no specials like half (½) will be translated. You can easily export your documents to an ASCII file in all version of LocoScript except the very earliest.

The procedure is as follows: From the Disc Manager place the cursor over the first file and press f1. Select Make ASCII file. Give the new file the extension .ASC or .TXT. This is so that the destination program will know it is a plain text file.

- ► Simple text file. Use this for most of your documents, letters, reports, etc or you will get a carriage return code [◄] at the end of *every* line.
- ▶ Page image file. With this the text will appear on the page exactly as typed. This is OK for menus or posters but it isn't suitable for a book. This option will not work with paragraphs, only single lines.

Save your ASCII files as Chapter1.ASC or Chapter1.TXT (or Chap_10.ASC, etc). Do not save it with the .DOC extension or you will confuse WinWord if you try and edit it with that program. Here again you must sort out all you file names before you start, without using any file extensions. If you have Letter.01, Letter.02 ... Letter.99 you will end up with one ASCII file which will be the 99th, it having overwritten all the previous files with Letter.ASC. Rename them to, say, Barclays, GasBoard, Auntie1, Auntie2 (not Auntie.1, Auntie.2).

Once you have converted all your files to ASCII copy them as *.TXT or *.ASC to a DOS disc or the hard disc on your PC. As above once in the PC program: File, Open, *.*, and save as .DOC (not .TXT).

Before you spend ages converting and copying *all* your PCW documents please think very seriously about what you really need moved across to your PC.

There is absolutely no point in copying redundant files for the sake of it! This applies especially if you decide to send your discs off to someone to have them converted for you. You will be paying by the file or by the disc for stuff you will never use again.

Backup your discs now!

Never send off your original discs. Always make a copy of the discs first; the package could get lost in the post.

Remember how much time you have spent researching, preparing and typing your work. Could you produce it all again if you had to? Can you even remember what you were typing twenty minutes ago? I doubt it. Save and continue often and make a back-up copy of your data disc before you switch off the machine. This is especially important if you always edit files on the M: drive because it's faster.

From the Disc Manager copy individual files to another disc using f3, Copy, or copy a whole disc using f2, Copy disc. If this is slow because you have lots of files in the M: drive then use Disckit on your CP/M disc; it will be considerably quicker.

Every so often copy the files on one disc onto another and format the first to refresh it. Verify the disc before you copy the files back again! This will help your discs last longer and highlight the ones which are about to fail. If it doesn't verify properly don't use it or you may lose everything you save to it.

Make a backup of your start of day discs every so often too. Never use your start of day disc to store files; you may delete a critical LocoScript file by accident and find that you can't print, or spell check, or even start the program again!

Simple E-mailing

by Frederick Eagles

If the kids keep on at you to buy a new computer simply so they can email you, think again. There is no need for you to abandon your faithful PCW and buy a PC. The Amstrad E-mailer will probably do all you need and cost you far less.



The above illustration is not very good because it's an MDA taken from a photo but you have probably seen the advertisements in the press. It costs about £100 but if you know someone who already owns one they can get another for a friend for £70 plus £6 postage (in round figures).

This is the Mark II version in silver; the earlier dark blue version can be picked up for about £40 but it is not so versatile. You need nothing more than a phone point and a power socket nearby to use it. As you will see from the above sketch it is basically a telephone handset with a 6" Liquid Crystal Display monochrome screen above.

But it is far more than just a telephone. There is a small keyboard underneath the handset which pulls out on a short cable. There is a built-in digital answerphone, which means no cassette tapes to replace. You can enter up to 700 names and details into an electronic Address Book which will store names, home, office, fax and mobile numbers, home address and e-mail address entered on the keyboard. This means that you can type in the person's name, press, say, the 'Home' Button and it will dial that persons home (or office or mobile) phone number automatically. So much simpler than that pile of Post-It notes on the wall.

For an extra £20 you can buy a "Pocket Docket" to which you can copy the address book to use when attending a meeting or party. This also acts as a backup copy like a floppy disc. If you subscribe to Caller Display (£1.50 a month) then the screen will show the name of the caller if they are in your Address Book.

It has a connection at the back to which you can attach a printer or a camera (to send photos with your e-mails) and this is where it comes into its own: sending and receiving e-mails. You simply select the name of the recipient from the Address Book, press the Email button, type out the message and send it off.

When you receive an e-mail there is a bleep and a red light stays on until the message has been read. (Similarly a yellow light comes on if there is voice mail waiting on the answerphone.) There is a standard charge for sending e-mail but you can store a number of messages in the memory and send them all off together for the same fee, currently 12p. This may sound a lot but its far cheaper than a new computer!

You can easily add e-mail addresses to your address book from newly received emails; you can also Reply to an e-mail by typing a short note into a one you've just got or simply Forward it to some one else.

It is possible to use the Emailer to leave messages for someone else in the family, to leave a memo for yourself, or to send a voice message to someone with an e-mail. (Imagine sending an voice message of all the family singing "Happy Birthday" to a relative by e-mail to arrive on the day!). It can also send faxes to a fax machine, complete with your fax header, but not receive them (yet). You no longer need a mobile phone to send SMS text messages (but not receive them) but keep the kids away; text messages are not cheap!

There is a built-in calculator on the pull-out keyboard which is quite powerful; the screen displays a clock giving the time and date when not being used by another function. This clock is updated from the Internet and, to be pedantic, it is not as accurate as the Greenwich pips on a radio.

There is an 'Amsurf' button which takes you straight to the Internet. However this is the one facility which I find disappointing. The screen is relatively small, compared with a PC monitor, and it is monochrome. Website pages are designed for larger, full colour monitors and the Emailer did not cope very well with all the sites I've tried. Graphics often appeared only as a small box and navigating your way around a web page without a mouse was not much fun. Sorry but, although this is great for easy emailing, please don't consider this as a cheap access to the Internet. Some sites can be viewed but not the majority.

And finally, for the Sinclair Spectrum freaks, you can download old-fashioned ZX games to play on-screen (for a fee)!

Odds and Ends

- If you need to convert Loco 4 files back to Loco 3 you must use the same version of Loco 4 as they were created in (or later).
- If you are running out of memory when using Loco 4 on a 512k machine delete the dictionary from the M: drive. You only need it when you are running LocoSpell.
- Don't leave your PCW by a window in direct sunlight or by a radiator. Don't store it in the loft where it can get *very* hot. Wait until it has cooled down before you move it and don't move it about unnecessarily. Don't plug *anything* in while it's on.
- Always turn your PcW16 off by clicking Tasks, then Switch Off, and finally turn off the wall socket; leave the red or green Standby switch alone! Turn it On again at the wall socket. Leave your 16 on for an hour or so each week to keep the internal battery topped up. Don't have the Contrast or Brightness any higher than necessary. All these will help it live a little longer.
- If the documents you are writing on a PcW 16 are *really* important then Export the file in ASCII or, better still, in RTF on a floppy disc. At least this way they can be rescued on a PC when your 16 finally dies. Files saved in the 16's compressed format can not be read on any other machine and files in the cabinet will just disappear when the internal battery gives up the ghost.
- "Apple's new clutter-free Imac clears your desk by combining the computer and the monitor." Didn't Amstrad do this sixteen years ago with the PCW 8256?

LocoScript Professional in Colour

by Mike Elliston

LocoScript 1 was first released with the PCW 8256 in August 1985. LocoScript 2 arrived with the advent of the PCW 9512 and it had several major revisions, a mail merge facility and a spell checker. These were available as add-ons for the earlier version and a database appeared soon after.

LocoScript 3, launched in 1990, added scalable fonts, although Amstrad only ever supplied version 2 with its 9512 machine. Version 4 generated a lot of interest for it had many of the features of more advanced word processors on the market, including multiple columns, the inclusion of pictures using MDAs and, later, colour printing.

In the meantime Locomotive introduced LocoEasy for the PC, based upon Loco-Script 1 and then LocoScript Professional for the PC as well. This had many of the features of Loco4, columns, pictures using the PC standard PCX graphic file instead of MDAs, proportional fonts sizes, etc. It included a spellchecker and a Thesaurus, and the database and mailmerge functions were built in too. The thesaursus was new and welcome but the major benefits were that fonts could be printed up to 99 point and as small as the printer would permit. In addition the illustrations were infinitely scaleable, only limited by the size of paper. Page Preview is very useful allowing you to see a page image on screen before sending to the printer and LSP works with a PC mouse too.

For anyone who has used LocoScript on a PCW for many years then LocoScript Professional is the most obvious choice of word processor when moving on to a PC. The only shortcoming is colour printing, until now! The new LSPro Colour Pack is only £14.95 and works with all fully LQ compatibles such as the Star LC-20s, Citizen Swift/ABC 24s, the Canon BJC 4000 series and the Epson Stylus 600 Colour printer.

This list excludes the HP Deskjets (a pity as they are so popular but it seems to be impossible to make them work with control codes) and 'colour' printers such as the Canon BJC 240/250. (Unfortunately Loco 4 won't work these in colour, either.) The HP Deskjets such as the 640c, 850c and 930c are all OK. Of the *current* Epson Stylus, only the 980c is compatible but that is rather expensive.

Thus there is a very good chance that the colour printer you use with Loco4 on your PCW will transfer to LSPro with no problems. However please contact Steve Denson at SD Microsystems (who now own LocoScript Software) and check if it will run with LocoScript (any version) before you buy a new printer. The phone number is 08700 736427 or you can e-mail support@locoscript.com

The Colour Pack allows the user to enter preset codes from the paste board for Black, Red, Blue, Purple, Yellow, Orange and Green where the codes use Magenta for Red and Cyan for Blue. Because you now have access to the industry standard colours, Yellow, Magenta, Cyan and Black you can use these to print full colour illustrations by overprinting colour separated pictures one upon the other in LocoScript Professional.

Three Inch Discs

by Denis H Martin

The original Amsoft labelled and other Japanese 3" discs are extremely reliable bits of kit and some are still in regular use since 1985. However over the years problems inevitably occur, usually on loading the Start of Day (SoD) disc, pressing f7 to activate a disc change or when making back-ups. A typical failure is signalled by unusual drive activity noises and frantic LED flashing, followed possibly by error messages such as Address Mark Missing or Disc Format Not Recognised or What Have You Done Now?

Don't panic, just copy the Back-up Disc and carry on. What? No Back-up? Then you may be in deep trouble now that Dave's Disk Doctor Service sadly is no longer with us! Don't despair – here are a few elementary things that the ordinary user can do which may rescue the situation.

The following suggestions are made for PCW8512 users assuming that the drives themselves are in good working order. When error messages start to appear frequently there may be a problem with the drive itself. If possible test the apparently faulty disc on another PCW to check this.

When a LocoScript disc fails in Drive A: insert it in Drive B: and press f7. If the files then appear on the Disc Management Screen (DMS) it may be possible to use the DMS f2 Copy function to transfer them to a known good disc in Drive A:, taking the Ignore Error and Continue option when it appears during the disc read operation. Disc failures in Drive B: are more serious as this is where most users keep the important stuff.

Try the DMS f2 720K disc copying procedure taking the *Ignore Error* option again if necessary. If this doesn't work then boot from your CP/M disc and use the **DiscKit** program to attempt a copy, or try PIP to move the files to a good disc one at a time.

Protext users could try the DCopy command to handle a faulty disc, once again taking any Ignore Error option that is offered. If all fails try to get a friend who has (and understands) the HiSoft Knife Plus program to help.

It is possible that failures in Drive B: are due to using CF2 single density instead of CF2DD double density discs. Dire warnings about this were issued by Amstrad in the 1980s which many users ignored and got away with. Most of our old discs have long lost their original identity due to re-labelling and I am not aware of any way of finding out which type they are.

A faulty Drive B: disc with unrecoverable data can sometimes be successfully reformatted, *verified* and used as a drive A: CF2 180k disc.

A few reminders on disc care and handling are worth repeating, apart from keeping them clean, dry and well away from heat and magnetic sources, etc. Never put them in the drives before turning the PCW on, never leave them in when turning it off and, in LocoScript, don't change discs unless the top information line of the Disc Management Screen says *Using none* or *Using M*: as the PCW may be utilising the disc for some arcane purpose of its own!

Three Inch Drives

by Denis H Martin

The Amstrad PCW 8526/8512/9512 3" disc drives are good examples of cheap production precision electromass mechanical engineering which weren't designed and made with a short limited life in mind. These words are being produced on a PCW8512 which is at least 13 years old and has only recently needed a little attention. When problems do occur it's usually due to dirty read/write heads or a slipping drive belt. New drive belts (CPC AVBELT5) can cost as little as 35 pence each in quantity and dirty heads are easily cleaned during the belt change operation.

The basic drive belt replacement procedure has been covered many times in other places. Probably the best article on the subject is by Steve Massam in Issue 24 of *The Disc Drive*, so it won't be repeated here again, but a description of what to expect when the drive is stripped of its outer casing may be of interest to first-time kitchen table mechanics.

The fascia plate and protective shutter, the disc locking and release mechanism, a drive motor complete with belt and pulley assembly, a head tracking actuator with the associated positioning gearing, the read/write heads, a write protection device, a red light emitting diode (LED) and the controlling printed circuit board (PCB) are all mounted on a robust diecast chassis.

There's not a lot to go wrong mechanically that can not easily be rectified or avoided with a little patience and some preventive maintenance. However, the electronics bits however are best left to the trade experts.

There are other things that can be done whilst the drive is stripped. When the old belt is removed look at the drive motor pulley, it will almost certainly be contaminated with old perished belt debris which will shorten the life of the new belt. Clean it off with a cotton-bud stick moistened with methylated spirits. The exposed read/write heads can be cleaned in the same way using video/stereo head cleaning fluid (the in-situ cleaning kits don't work very well).

The heads are positioned over the right disc tracks by the tracking actuator which is connected to the head carrier by a coarse threaded screw shaft which will benefit from the application of a film of a specialised electronics fluid cleaner/lubricant such as Amberlube or its equivalent obtainable from the local electronics supplies shop. In an emergency WD40 will do but don't spray it – use a moistened cotton bud.

With caution and an awareness of the risks involved a drive can be tested before installing it fully back into the PCW but be warned, neither the writer or the PCW Club can take any responsibility for personal injury or damage incurred. If you don't feel fully confident that the test can be safely accomplished don't do it – better be safe than sorry. All you are doing is saving a little time if you've done something wrong such as installing the belt with a twist in it or lost the write protection pin.

The drive is powered by low voltage direct current and should be safe to handle when running but with the PCW case removed components powered by potent-

ially lethal high AC voltages are exposed, so make sure that your hands and those of enthusiastic helpers (or the paws of inquisitive pets!) are kept well clear of the rear of the PCW when open.

With the drive outer sheath removed and the PCW un-plugged connect the drive data and power plugs. The cables are just long enough to prop the drive up beside the PCW but be careful – they will be set in shape and embrittled with age so don't try to straighten them too much to gain length; they may crack.

Switch the PCW on then insert a Start of Day disc and watch the drive operate. A couple of f2 Verify or Format operations will check out most of the drive's mechanical functions. If the head just tracks to and fro without picking up and loading the data make sure the heads are free of any applied lubricant or try another disc. If the result is the same the problem is most likely to be a duff printed circuit board.

Editor's comments.

The flexible drive band is the weak link in the 3" PCW drives. It hardens with age so don't expect to store one for too long. It gets brittle with heat so keep your PCW away from radiators and direct sunlight.

The drive band will set into shape over time so start the machine up every few months and run the drives up to alter the shape of the drive belt around the two pulleys, one large and one quite small.

The read/write heads will drift out of alignment over time so make back-ups of your important data and program discs on a regular basis or you may find that you are unable to read one of your own discs a few years after it was written!

Bits and PCs

• If you are intending to copy any PCW files across to a PC at a later date use *only* the letters of the alphabet and the numbers 0 to 9 in the filename with just a full stop separating the filename from the extension, thus: Filename.Ext.

Although such characters as + or ½ are acceptable in CP/M (which is all that LocoScript is) they are not acceptable in DOS which is the Disc Operating System used on most PCs. If you try and copy a file such as 3½"Disc.MDA across to a PC it will almost certainly hang the copying program and possibly the machine.

This rule still applies if you use 2in1 on a PCW to copy the file from a PCW disc onto a PC/DOS disc. As soon as you put the DOS disc into a PC it will refuse to read the files beyond the one with the unacceptable character in its name and possibly hang the PC as well!

Announcement

 Denis Martin has a number of PCW items for sale at very reasonable prices with all proceeds going to the cancer charity AICR. The list is too long to print in full but all are original software with manuals and discs including Loco2, File, Mail, Spell, LocoFont, the 24 pin printer drivers disc, Loco3, MD2, MD3, Mini Office Pro, Protext, ProScan, various games and some 3" discs both new (£1) and second-hand (50p); postage and packaging is extra. Call Denis Martin on 0161 483 4634 [Stockport]. An excellent opportunity to acquire that desired disc or manual at a bargain price and to ensure a donation to a well-deserved cancer charity.

A Year with my PCW

by Harry Saunderson

I have been wracking my brains to discover what I could write about for *The Disc Drive*. There cannot much more to be said about the classic PCW and yet it sits there on a table in the corner of the room; it makes no noise, very rarely complains, and manages to respond to almost every request I make of it.

This year has been no exception, although perhaps not quite so demanding. I have managed to produce some items for *The Disc Drive* which gave me some practice at including pictures in LocoScript 4. It is really satisfying to see this work published and I hope of interest to someone else. Lots of other tasks have been completed, mostly of the mundane variety, such as all the boring letters, the holiday itinerary and address lists.

What brings the PCW into its own though, is that all the tedious work can suddenly become exceedingly useful. As my elderly mother gets even older, and her eyesight weaker, I can produce her perennial Christmas Card List in an ever increasing font size; and the spin off from this is the convenient printing of the address labels. A great relief when someone has been corresponding with so many people over so many years. Another benefit, although rather sad, is that as the correspondents fade away the database can be amended so easily.

One of my more childish whims is to have a small collection of Hornby clockwork trains. In recent years I have displayed them at our local Model Railway Exhibition. Alongside I have placed my trusty PCW and played a slide show, created in MicroDisplay, giving information about the local Railway Club and encouraging people to join. Part of the display involves making up a train and having it travel across the screen. Some people do wonder how such a 'simple' computer can perform such complicated tricks. I am sure it is no wonder to any of us.

Over a number of years I have produced tickets for some local events. I have often thought of, and immediately ignored, the possibility of putting numbers on them. It always seemed to be an impossible task, especially as I am restricted to a single page printer. However, this year I set myself the goal of mastering sequential numbering. I knew it could be done by the Page Numbering facility in LocoScript, but this would mean cutting paper into very small pages. This creates some difficulty in controlling the alignment of the paper through the printer.

Now came the moment for a fair amount of courage: I opened the LocoMail instruction manual. There were rather complicated ways of producing invoices but not apparently a simple way to just put numbers on a piece of paper. Undaunted, I turned the pages and found a section on Counting. This I found allows you to enter your start number and add one more for each pass that LocoMail makes. Having devised the LocoMail routine required, I set about creating the Master Document. I found that, using LocoScript 4, I could adjust all the four margins of the page to

their smallest limits and, by using 'columns' insert twelve quite reasonably sized tickets on to a page. The small amount of text can easily be imported from a LocoScript or LocoFile datafile and the ticket number placed wherever convenient.

If you do not have access to 'columns' you could divide your page width into two and turn your paper round to print the second half of your tickets file. I hope this simple example works for you.

[simple Data File TICKNUMB.DAT of 2 pages]...

Club
Title
Date
Place (end of page marker i.e. ALT/RETURN)
HORNBY CLUB
Annual RailShow
Saturday 24th November 2001
WHITE HOUSE COMMUNITY CENTRE

[Master Document TICKNUMB.MGE — Remove all (+ReV) and (-ReV) — for Mail codes use + or - keys with M key]... (+PItchPS)(+LPitch6) (+Mail)n=?#;0 or previous number(-Mail)(+Mail) loop="(+Mail)club(-Mail)(RAlign)(+Mail)+n(-Mail) (+Mail)title(-Mail)

(+Mail)date;picture 8 wide 2(x2)high(-Mail)(RAlign) (Picture)

(+Mail)place;(bottom line of 7)(-Mail)

...[3 line spaces]...

(+Mail)counter=[counter-1] (-Mail)

"(-Mail)

(+Mail)counter=?#; How many repeats

%loop@counter(-Mail)

If anyone has a different or better method for producing sequential numbering please write in. I, for one, will be most interested to see how it can be done.

Exclusive NEW Microdesign Fonts

The Club now has exclusive rights to distribute a number of new novelty MD3 fonts designed by Mike Elliston and not previously released. They will be available from at the Club's PD Library or can soon be downloaded from John King's website www.pcwking.freeserve.co.uk.

The designs remain the copyright of Mike Elliston and may not be sold. Fonts include Braille



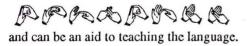
in three sizes, one each for 240, 300 and 360 dpi printers (dot-matrix, laser and inkjet printers), plus one with the alphabet to aid in decoding.

Then there is Circus on one size only



which can readily be printed in two colours with the use of shades.

Deaf and Dumb is twice the size shown



DELPHIAN

is similar to the LocoScript version and comes in a number of sizes.



is also excellent for multicolour effects by the judicious use of flooded shades.

NAROsans

comes with both upper and lowercase but

TOWER Tower

is even narrower to squeeze that heading in!



In case you can't read this one it is Semaphore but with a signal tower not a Boy Scout! If you look carefully you will see the alphabet hidden in the front path when printed at actual size, twice as large.

The piece de resistance in the collection is Sapphire, originally produced for distribution on a PcwToday cover disc but that will never happen now. Sapphire comes in a number of sizes and can also be printed multicolour with reversal effects.



Each font comes with a TXT file which you should read before trying to use the file as it explains how to use some of the extra characters that may be included.

The other fonts now available were previously released as Extra Fonts Disc K. These include the manual script

Breeze

in a wide range of sizes and with lots of terminals and ligatures which give it the appearance of a hand written brush script,



in a wide range of sizes as well, again with that informal touch, and from the 1930s,

LINEA

Also on that disc were three sizes of a formal script often used for wedding invitations, certificates and similar work; this was Invitation Script:

Invite Script

Because postcodes or letters after a person's name should never be set in script capitals, Invitation Script is accompanied by Invitation Italic Small Capitals

INVITE SC

in three matching sizes and with ranging numerals for postcodes, etc. All fonts come with an helpful TXT file, two have a CHR file which shows the special characters when in MD3, and there is an Invite.Tst file which demonstrates how a typical wedding invitation would look when set with the extra characters included with the font (see below). The small capitals are not really intended for use on their own!

M & M' John M'Donald request the pleasure of the company of

at the marriage of their daughter

Samantha Helene to D* Hector James MInnes

at 2.30 pm on Saturday 15th April 1995

at St. Margaret's Church, Hertzog Street, Annez

S at a reception afterwards at the Eßen Hotel.

RSVP The Manor House, Church Lane, Annez EH14 2DL before Friday 3rd March 1995.

Members' Recommendations

The following traders have been recommended by various members of the Club who have used them over the past year or so. They are not listed in any particular order of priority and the Club can in no way vouch for any supplier detailed below.

H Ibrahim, Block D, Ringway Industrial Estate, London N11 2UD.

Phone 0208 368 6868 – email: comprep@dial.pipex.com
Still undertakes repairs to PCW computers and printers.

Tonezone Consumables, 74 Vancouver Rd, Durrington, Worthing, W Sussex BN13 2TG
Phone 0870 8001800 – Fax 0870 8002800 – Website: www.tonezoneuk.com
Excellent selection of ink cartridges (and solvents) for Canon, Epson, Lexmark,
Hewlett-Packard and Xerox printers at good prices (but not ribbons). Also
speciality papars, fax cartridges, batteries and mouses.
They also have a shop at 10 Littlehampton Road, Worthing, Sussex.

SD Microsystems Ltd, PO Box 99, Thetford, IP24 1NA.

Phone and Fax: 08700 736427

Website: www.locoscript.com - email: sales@locoscript.com

The home of LocoScript software. Stockists of all the LocoScript range of products, including some you probably did not know existed! Also Ansible Index, Rocket Spreadsheet, Moonstone 2in1, Route Planner, Money Manager, etc, and many more. A wide range of PCW, LocoScript, Protext and CP/M books. Discs, ribbons, printwheels and printer accessories plus the full range of LocoScript products for the PC. Disc copying and conversions undertaken - call for details. Membership of the LocoClub gives discounts on purchases and regular news.

John King, 26 Guysfield Drive, Rainham, Essex RM13 7AJ

Telephone: 01708 630477 – Website: www.pcwking.freeserve.co.uk Spares, repairs and advice on the full range of Amstrad computers including, of course, the PCW. Disc copying and conversion undertaken. A large selection of second-hand hardware and software available. Send large SASE for a copy of the latest list of PCW items for sale, all at reasonable prices.

Pinboard Computers, 7D Diamond Industrial Centre, Works Rd, Letchworth, Herts SG6 1LW Telephone: 01462 683663 – Fax: 01462 480042

Website: www.pinboard.co.uk

Spares and repairs to a wide range of computers including, when spares are available, PCW

City Laser, 32a Hubbards Chase, Hornchurch, Essex. Phone 01708 445928.

Spares and repairs for a wide range of laser printers, including elderly models!

Exclusive Crossword Maker Offer

The Club has exclusive rights to Brian Dorricott's Crossword Maker program for the PCW and has the last few remaining copies for sale to members at a special bargain price. This program makes crossword puzzles up to 28 by 28 squares in size which can be saved to print out in either MicroDesign2 or 3 or in LocoScript.

A number of word files are provided with the program complete with clues and further word files will be available from the Club's Public Domain Library in the near future.

Some twenty crossword templates are included as is an extensive on-line help system. The Crossword Maker can also be used to find true anagrams within the word files which addicts will enjoy.

The program will run on any of the PCW machines except the PcW16 but as the club can only supply it on a 3½" CF2DD disc you will need to copy it onto a 3" disc yourself if necessary. You are recommended to make a backup copy before use anyway.

The disc also includes Brain's Word File Manager which will sort your own list of words into order enabling the use of specialised topics such as medical or hobby themes. Word files are limited in size to half the capacity of the disc, about 350k on a CF2DD, say 45,000 words, large enough a vocabulary for most users?



Printed in MicroDesign3

A Word Search Generator completes the bundle creating a puzzle where selected words are hidden horizontally, diagonally or vertically in a square of random letters. All three programs come with copies of the printed manuals, sealed in a plastic wallet. This collection would have set you back over £70 when it first came on the market!

For your bargain send a cheque for £5 made out to BAPCW Club to The PCW Club, 96 Sparrows Herne, Basildon, Essex SS16 5EX. Remember this is on 3½" 720k CF2DD disc only and you will need a 3½" drive to copy or use it. You do not have to have MicroDesign to use it but the printed result will be superior to that obtained from LocoScript. The supply is limited so first come, first served. Please remember to make your cheque payable to BAPCW Club (and no other payee).

The PcW16 Page

If your PcW16 mouse has died remember the mouse is by no means essential to keep your 16 going. Simply touch the [Task] key plus the key on the keyboard which appears underlined on the dropdown menus or use [Stop] to back out. The other function keys, f1, etc, or the coloured keys will be obvious. Always read what it says on the screen! We know of no PC mouse which will work on the 16 – sorry.

Be warned that an elderly PcW16 is notoriously unreliable. I would certainly not recommend anyone to buy one secondhand or to rely on it for storing data other than using it for the sheer fun of it.

Never save anything to the cabinet (internal memory) *unless* you have saved it to disc also. Always Export your data to a disc in either RTF or ASCII format as no other machine except a PcW16 can read the natural (compressed) file format used on the 16. (See the manual pp 67/68). A standard PC with a High Density (1.44mb) disc drive can read the 16 discs but can not translate the native 16 file data once copied. Do not try and use Double Density 720k discs (with only the one square hole).

Turn the machine on for an hour a week to keep the internal battery topped up – once that is dead the machine is dead because the battery is part of the internal circuitry, not a replaceable component.

Always turn the machine off by Tasks (Task+T) then Switch Off (Task+O) and turn of the wall power socket. Do not rely on the red/green power switch on the front of the machine or you may find that it will not turn on again later. Use the wall power socket to turn on again but please leave the red/green switch alone.

Very few places now offer a repair service for the PcW16 but one bought to my attention recently is:

EDCOM Ltd, 203 Eardley Road, London SW16 5TQ, Phone 020 8679 4688.

For do it yourself repairs you can get some spare parts from:

CPC Plc, Component House, Faraday Drive, Fulwood, Preston, Lancs PR2 9PP Tel:01772 654455.

email: sales@cpc.co.uk

Note that the above two companies are in business to make money, therefore they will charge full retail prices for their spares and repairs!

If your machine is beyond economical repair you can arrange for disc data transfers from PcW16 discs to PC or Windows discs from:

John R.P.King, 26 Guysfield Drive, Rainham, Essex RM13 7AJ.

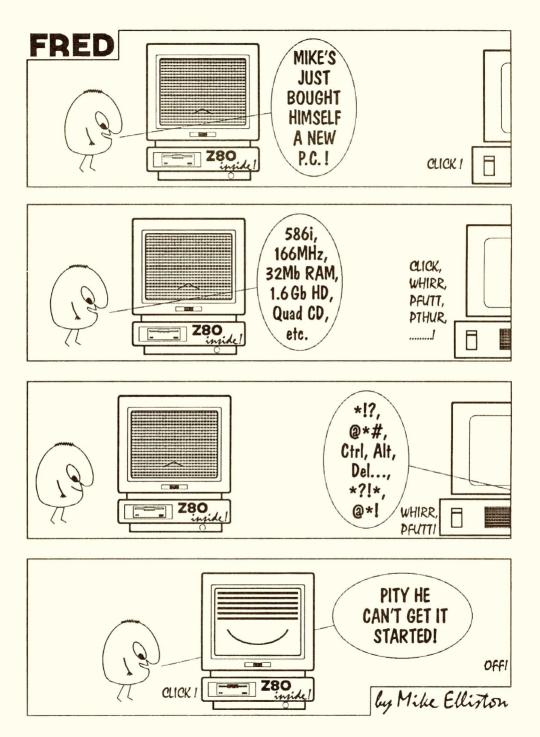
Phone: 01708 630477 or email:

john@pcwking.freeserve.co.uk

If you have access to the internet then go to John's web site for lots more information: http://www.pcwking.freeserve.co.uk.

Please note that the time involved in simply copying RTF or ASCII files from a PcW16 disc to a standard PC HD disc will be far less than that of opening every native PcW16 compressed file and then exporting it again in RTF which will be reflected in the costs incurred.

RTF (Rich Text Format) files will import into other word processors with most of the bold, italic or underlined codes retained whereas ASCII files just contain the raw text as from a typewriter with no formatting, therefore exporting to RTF gives the better final result.



Finale

This is the last copy of the PCW Club Newsletter in its printed form. The paucity of PCW news and gossip no longer justifies a newsletter, even on an occasional basis. The vast majority of "contributions" this last year have been lists of members' PCW items for sale, long out of date. My thanks go to those few regulars who have helped make this issue possible.

The Club has not folded. It continues to hold monthly meetings in Basildon, usually on the first Thursday of the month, and any PCW user is welcome to attend at no charge – phone Nick Chaundy on 01268 454917 for details of the next meeting.

The Public Domain Library will continue to be available from Nick Chaundy send an SASE to 2 Clickett Hill, Basildon, Essex SS14 1NP for details of what is available - and John King will continue to offer a spares and repairs service at very reasonable rates. Remember that orders for PD software must be accompanied by the requisite number of discs already formatted and verified on the machine for which they are intended. Under no circumstances will HD discs with two square holes and marked with the HD symbol be accepted. Please do not ask for copyright software as refusal often offends! Try the Locomotive or John King catalogues instead.

To the best of my knowledge there has been no new software or hardware for any of the PCW range of computers for a number of years. What little news there is will start to appear on the PCW Club's website www.thepcwclub.org.uk as and when it arrives. Over time the more popular items of PD software will be available for download and there will be links to other PCW sites and suppliers when they appear.

We will try and help you with your PCW problems and frequently asked questions will be published on the website too, along with articles which have appeared in both the *Disc Drive* and the *Newsletter* over the years. Please include a 'phone number with your enquiry (it will not be published anywhere else) for it does make it so much easier to talk a problem through. *Always* include full details of the PCW, the printer, the disc size and type, the version number of the program you are using, etc, with your enquiry.

Where else can you get help? The last issue of *PcwToday* appeared in February last. The Crawley club is now a computer club, primarily dealing with PCs, although it does have the rare item on PCW issues in its monthly newsletter. Aldyth Scott is the Membership Secretary, 01293 523513, or go to www.crawleycomputerclub.org.uk.

The most obvious source of information is LocoScript now run by Steve Denson of SD Microsystems, P.O.Box 99, Thetford IP24 1NA, phone 08700 736427 or see the web site at www.locoscript.com for a full range of LocoScript and PCW software, spares, discs, printers, etc.

I forgot to mention one other exclusive MD3 font now available from the Club: Euro.mdf. This unique font produces the standard Euro symbol in a variety of sizes depending on which key you touch. This means that you only have to load the one font, regardless of the size you require! As with the others you can download it from John King's website or get it on disc from Nick Chaundy at the Club PD Library.

• This Newsletter was produced entirely in LocoScript or MicroDesign3 and printed on an HP III laser by Mike Elliston at 96 Sparrows Herne, Basildon, Essex SS16 5EX for The PCW Club during January 2003. •