

Script

Issue 14

THE LOCOSCRIPT NEWSLETTER

In this issue of *Script* we look at a wide range of word processing facilities available with LocoScript. We also have the full story of Locomotive's recent visit to the Soviet Union, attending the COMTEK show in Moscow.

Extracting addresses to print directly onto envelopes can be rather difficult. In this issue we have an article on the subject which shows you a number of different methods so you can choose the one that suits you best.

Continuing our series of tips for authors we have an article on producing an 'action column'. This shows you how to put short notes in the margin simply by using special layouts. The technique could also be used to annotate the minutes of meetings, for example.

An often over-looked feature of LocoScript is its ability to split text into neat pages 'automatically'. How to take full advantage of this feature is explained in the 'Fine Tuning' article which shows you how to control the Page breaks in a document.

The increasing sophistication of printers means that they now have a wider range of typestyles available. In the first of two articles, we explain how to use the CHARKIT program to create the Character Sets needed to use these different typestyles with LocoScript.

Finally, this issue's LocoFile article shows how to sort your datafile into birthdate order. With this ordering it is possible to produce a reminder list of cards to send in a certain month.

As you have probably noticed, this issue of *Script* is late again! We've been very busy with LocoScript PC, and we can only apologise and thank you for your continuing patience!

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Dorking, Surrey,
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News

LocoScript PC

LocoScript PC is now shipping! So, if you've been waiting to buy a PC now's the time, as you can move to a faster machine without losing LocoScript. In fact the initial demand for LocoScript PC was so great that we sold out our initial production almost immediately. But we brought forward the next production batch to minimise the time you'll have to wait if you order your copy now.

If you still haven't seen LocoScript running on a PC, you can see it in action at every one of our newly set up network of Authorised Dealers. Every dealer has an evaluation copy of LocoScript PC so that they can demonstrate how the new version operates.

We have included a list of the Authorised Dealers along with this copy of *Script* so that you can find the one nearest to you. But, if you prefer to deal direct with our mail order department at Dorking, then of course, you can continue to do so.

Transferring documents from a PCW to a PC

To help you transfer from PCW to a PC, we've developed LocoLink – a special cable with some programs to move your files. One end of the LocoLink cable plugs into the parallel printer of a PC. The other end includes some electronics we've designed and a connector which fits directly onto a standard UK model PCW's expansion port (the slot with the edge of the PCW's main board sticking out).

Supplied with LocoLink is a 3" disc with a program which you run under CP/M on the PCW. LocoScript PC includes a matching program to run on the PC.

Whether you want to transfer one document or a whole disc, all you need to do is connect the cable, and run the program on each computer. LocoLink even shows graphically the amount of each file left to transfer, and if transferring several files, the total amount of transferring left to do.

LocoLink is being well received – so much so that we're having trouble keeping up with the demand! But if you can't get LocoLink immediately, don't worry: we're flying in more cables from the Far East and have brought forward our future production schedules.

To Paris by Train

And not just any train! *Script* reader Trevor Timson was the winner of our Passport to Word Processing competition which was open to *Script* readers and visitors to the PC Show. The prize was a weekend for two in Paris, travelling on the Orient Express.

Mr and Mrs Timson set off from Victoria Station on the 31st May. They were last seen relaxing in style, drinking champagne in the luxurious Orient Express carriages. We wish them a very enjoyable break from LocoScript!

24 Pin Printers Sale

We started to sell 24 pin printers directly because they could be difficult to find. Now, the market for 24 pin printers has moved on and they have now become both widely available and widely discounted!

So, we've decided to discontinue selling printers and are selling off our stock of NEC P6s and P2200s at silly prices to make room in the warehouse for our own software. The P6 has an RRP of £650, and we're selling it for £500; the P2200's recommended price is £385 but we're only charging £300. Delivery is £10 by overnight courier, and if you want we'll throw in the latest printer drivers (both 24 Pin and standard) for £35 instead of the normal £44.90 and a suitable cable for your PCW for £10. Don't forget that you'll also need an interface for 8000 series PCWs.

Ring us on (0306) 740606 and place your order with Access or Visa (sorry, no cheques). But hurry, stocks at this price are limited and unrepeatable. All prices include VAT.

Creating extra Character Sets

The CHARKIT program is one of the more advanced features of LocoScript and can be rather daunting to use. In this, the first of two articles about CHARKIT, we show you how simple it can be when you want to create a Character Set for a built-in font on an alternative matrix printer.

A Character Set is a list of characters which your printer can print. LocoScript has a wide range of characters but whether you can print them or not depends on your printer. Most alternative printers have many fewer characters than the number supported by LocoScript and the range of characters can vary considerably from printer to printer. The Character Set file tells LocoScript which characters the printer can print and the commands required to print them.

The Printer Driver files we supply on the Printer Drivers Disc each have a Character Set built into them. (We looked at this in detail when *Script* was first published so for a full description refer to the article 'Using printers' in Issue 1.)

For matrix printers, these Character Sets are designed to support one of the built-in typestyles, but if your printer has more than one built-in font you need an extra Character Set file for each font you want to use. For some printers, eg. NECs, we've provided extra Character Set files on the Printer Drivers Disc. For others, you have to construct the necessary Character Sets yourself, using the CHARKIT program provided with the Printer Drivers disc.

So for those who want to make use of different built-in fonts on other printers, CHARKIT is the answer.

How CHARKIT works

CHARKIT is a CP/M program which takes a textual description of a Character Set (in an ASCII file) and produces a .#xx file which can be used with a matching .PRI file.

There are three stages to producing a .#xx file.

- 1 creating an ASCII file with the details of the Character Set. This is known as the Character Definition file. (LocoScript is as good a means as any of creating the Character Definition file. Before using it with CHARKIT, simply convert the LocoScript version of this file into an ASCII file by using the Make ASCII feature.)
- 2 running CHARKIT on the ASCII file
- 3 installing the new Character Set file on your Start-of-day disc.

To show you how it works we'll go through the steps to build a Character Definition File for a built-in font on a 24 pin printer. Our example is the Star LC24-10 printer which is supported by the LC24.PRI file on the Printer Drivers disc. It has four built-in fonts, Orator, Script, Prestige and Courier. The Courier font is supported by the Character Set file built into the LC24.PRI file. We shall create a Character Set to select the Orator font.

If you have a Star LC24-10 and want to follow the steps given here, it's a good idea to have both the CHARKIT instructions (found in the booklet 'Defining Character

Sets' for PCW8256/8512 owners or the 'Printer Drivers and Character Sets Disc' booklet for PCW9512 users) and the Star LC24-10 printer manual to hand. The Printer manual gives all the information you need about the characters your printer can print and the codes needed to access them. If you have a different printer, it is likely that the same general actions will work, but the details may vary slightly. Read through the rest of the article, and check the relevant escape codes in your printer's manual.

Before you start, make sure you have made a CHARKIT disc. This is described in the section 'The CHARKIT files' in the CHARKIT instructions.

The Character Definition file

Before we look at the structure of the Character Definition file, it's worth noting some background information.

LocoScript prints a document by sending a series of codes to the printer. Some codes are printable characters such as the letters a, b and c etc. Others represent instructions to carry out a particular action, such as moving to the beginning of a line. Taking this a step further, codes can also be grouped together to form what's known as an Escape sequence. Such a group of codes can perform actions such as switching on a Print effect like Bold. (They are called Escape sequences because the first code in each group is usually the code for Escape.)

What each code means depends on the printer's software. Printer software varies from manufacturer to manufacturer and you can't rely on all the codes meaning the same thing on different printers.

Fortunately, there are a number of generally observed conventions which simplify the situation to some extent. In particular most printer manufacturers have adopted the American ASCII standard which means that the characters a-z, A-Z and 0-9 as well as the common punctuation marks use the same codes. In addition, many dot matrix printers use the same characters and codes as one of the major manufacturers such as IBM and Epson.

With this in mind, we'll look at creating the Character Definition File.

The Character Definition file is made up of two main parts. The first part (the Header) gives basic details of the Character Set such as the names of the Set and Style which appear in the Printer menus in LocoScript 2, and the commands needed to select the Character Set.

The second part forms the body of the Character Set. This is where the characters, and the codes the printer uses for each character, are held. If the Character Set is a proportionally spaced one, information about the PS width is also included.

At first sight, you might think you need to type in a lot of information. In fact you will have to do very little work. As we said earlier, many printer manufacturers use the same characters and codes as either IBM or Epson. To help you build extra Character Sets for dot matrix printers, we have supplied two documents on the CHARKIT disc which correspond to these two types of character set. The FX.EG file is an example of a standard Epson character set. The IBM.EG corresponds to a standard IBM character set. These files are already set up in the format CHARKIT expects – all you have to do is adapt them to match the character sets in your printer.

Luckily, many matrix printers are largely compatible with the IBM Character Set. The differences tend to be in the more obscure characters, which can be ignored in everyday use. This means that you can, by just making a small change, adapt the IBM character set to your printer – in our example the LC24.

In this article, we'll concentrate on the Header section of the Character Definition file. This contains the details we need to change to select a different font. Most of the details recorded here are very straightforward. The diagram on the facing page shows the File Header required for the Star LC24-10 to select the Orator font, and explains the components of the File header. The section 'Preparing the file' in the CHARKIT instructions gives a more detailed explanation if you need it.

In the next issue, we'll look at changing the supplied character sets to fit another printer perfectly. So if you want to use special characters, or the example Character

```

: Orator CHARACTER SET FOR Star LC24-10 PRINTER
: 123456789012345678901234567890
!"Star LC24-10 PRINTER"
!"Orator typestyle."
!"Anyone          20 May 90"
:123456789012
"Orator" 24; Character Set and Default Width
:123456789012
"Standard" PS; Character Style & Pitch
!"ESC'k!'3!'ESC't!'1!'ESC'6" ;Orator font and IBM set
120 ; PS widths are in 1/120".
!
```

Comment explaining this file

The Identity text. This is displayed when you use the Inspect option on the F5 Document menu to identify the .fxx file. It is preceded by a line of numbers to check that the text fits in the 30 characters allowed.

The Character Set name. To select this Character Set file, you display the Character Set menu in LocoScript 2 and put a tick beside this name. The number gives the size of a space in PS (in 240ths of an inch).

A comment to check visually that the name is 12 characters or less when editing the file.

The Character Style name - this appears on the Character Style menu when you have selected the Character Set. (The number after the Style name is known as the fundamental pitch. You only need to put a pitch in here if you are using a simple printer which can only work in one pitch.)

The selection sequence. What you put here tells the printer which built-in font to use.

This is only relevant if you use proportional spacing. It represents the units in which PS widths are measured. We'll leave it unchanged for our Orator font, as we won't be changing any of the PS widths in the file.

Definition files need further changes before they will work on your printer, you'll need to wait for Part 2.

The main thing you need to do to adapt the IBM.EG Character Definition file to the LC24-10 and the Orator font is to change the Selection Sequence in the Header section. This tells the printer the font to use and gives LocoScript the commands to select the correct Character Set. The form the instruction takes on a LC24-10 is a number of escape sequences.

The first escape sequence selects the typestyle. For the Star LC24-10, this information is given on page 58 of the printer manual and is of the form !"ESC'k'n' where n should be replaced with the number of the typestyle. We want the Orator font, which is number 3. The full sequence looks like this:

```
!"ESC'k!'3'
```

As we are using the extended IBM character set, we also need to tell the printer this. The commands to do this are also listed in the printer manual, and for the LC24-10 are:

```
!"ESC't!'1!'ESC'6"
```

The rest of the file holds information about the characters the printer can print. This is not 100% correct, but is sufficiently close that we can leave it unchanged. Part 2 of this article will explain how to change the details of the characters to match your printer exactly.

Running CHARKIT

To create the Orator Character Set, you now have to convert the Character Set into an ASCII file and run the CHARKIT program on the ASCII file. The full instructions for doing this are given in the CHARKIT instructions in the section on 'The Character Definition file' and in 'Step 3: Creating the Printer file'. If you get any error messages as you run the program, Appendix VI 'CHARKIT Error messages' will help you to find the problem. Simply edit your Character Definition file, make the required changes and save the document to disc. Then convert it into ASCII again and re-run the CHARKIT program.

After you have successfully produced the new Character Set file, you have to install it on your Start-of-day disc like any other Character Set file. The precise keystrokes for doing this are given in the section on 'Installing and using the new Printer file' in the CHARKIT instructions.

It is easy to extend this to all the other fonts built into Star LC24-10. Simply copy the Character Definition file that you have created for the Orator Character Set, change the Character Set name and the command required for another font, then process the new file with CHARKIT.

Fine Tuning Page Breaks

LocoScript has a number of ways in which you can control where page breaks can occur. The secret of getting documents split correctly into pages is to know which method best suits your needs – or even by combining several of the different methods.

The basic method

The simplest way of making sure that new pages only occur where you want them to is to put in End Page Here codes (otherwise known as form feeds) wherever you want the new pages to start. Each form feed is shown on screen by the ↓ character.

This is fine for important new pages, such as the start of a new chapter. However, where you just want to avoid splitting a paragraph or table, this approach is rather inflexible - if you change the text in any way you'll have to go through it all and correct the page breaks!

LocoScript provides automatic ways to avoid a poor choice of page ending. To use these effectively you need to decide what you want. You can choose to apply a general rule

throughout the text, or special rules governing particular sections of the document.

General Rules

Most often you'll want to avoid widows and orphans, that is a single line of a paragraph being pushed over to the top of the next page, or only one line fitting on at the bottom of a page with the rest of the paragraph appearing at the top of the next page.

Alternatively, you might want to avoid splitting paragraphs at all. This is particularly useful for lists of addresses, for example. LocoScript treats a number of consecutive lines separated by carriage returns as a paragraph - just as you might lay out an address.

Setting page break control

The screenshot shows the 'Setting page break control' dialog box in LocoScript. On the left is a menu with options: Document setup, Edit identity, Insert text, Disc manager, Run LocoFile, Show phrases, and Show blocks. The main window displays a status bar with the following text: 'B: group 0/DOCUMENT.000 Document setup. Printer idle. Using B:M: Layout 0 Pi12 LS1 CR+0 LP6 Page --- line -'. Below the status bar are four lines of page break control options: 'end of header 1 : used for all pages', 'end of footer 1 : used for all pages', 'end of header 2 : used for no pages at all', and 'end of footer 2 : used for no pages at all'. A sub-dialog box titled 'Page break control' is open, showing 'Page break control' selected in a list, with three options: 'Allow any page break', 'Prevent widows and orphans' (checked), and 'Do not break paragraphs'. The 'EXIT' button is visible at the bottom of the sub-dialog.

LocoScript has built-in mechanisms for both these requirements. You need to set up the document simply to avoid widows and orphans or not to break paragraphs. Either can be set from the same menu in Document Set-up.

In fact, we consider it sufficiently good practice to avoid widows and orphans, that this is set as the default. So if you take no other action, LocoScript will always avoid widows and orphans.

To change the general rule set for the document, edit the document as normal, and press **[F1]** to call up the Actions menu.

Check that the cursor is on Document Setup, and press **[ENTER]** to go into Document Set-up. The menus change, and the one we require is the Page menu, called up by pressing **[F5]**.

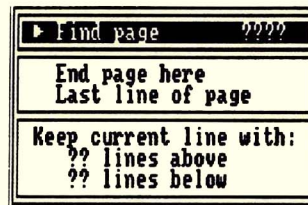
Move the cursor over the Page break control option and press **[ENTER]**. Then simply choose whichever of the options you want by moving to it and pressing **[H]** followed by **[ENTER]**. This will ensure that these rules for choosing where to start new pages will be used throughout the document. Press **[EXIT]** followed by **[ENTER]** to return to Document Set-up, and then press **[EXIT]** and **[ENTER]** again to return to editing the document.

Where the general rules are insufficient

You cannot always rely on the general rules to keep page breaks out of particular areas. For example, the text may include a table with several carriage returns to give blank lines. LocoScript's general rules cannot prevent a page from being started at one of the blank lines.

LocoScript has a way of keeping such a general collection of lines together on the same page - the Keep lines together code. All you have to know is how many lines are to be kept together.

Simply move to the start of the table, and either use the *Editor's* Page menu (different to the one in Document Set-up) to insert a "keep following lines together" code or insert the code directly.



To use the Page menu, press **[F5]** to call up the menu and move to ?? lines below. Type in the number of lines to be kept on the same page and press **[ENTER]** twice.

The 'short cut' which avoids calling up the Page menu is to type in the code directly by pressing **[H]**, followed by K and the number of lines, then pressing **[ENTER]**.

Alternatively, you could move to the end of the table and use a "keep previous lines together" code. This is either selected from the Page menu by choosing the ?? lines above option or entered by pressing **[H]**, typing K followed by the number of lines, then pressing **[ENTER]**.

Where you don't know how many lines

You could insert the Keep code as above, and change it as necessary, but this is tedious and error prone. Indeed, if you were creating the table automatically using LocoMail, you might not even know how big it will be.

Provided you know approximately how big the table is going to be, the answer is to use two Keep codes which overlap, a "keep following lines together" at the top and a "keep previous lines together" at the bottom. Then as the actual size of the table varies, the amount of the overlap varies, but there's never a point that LocoScript could break the table without splitting one of the two overlapping areas.

To keep several paragraphs together

This can be achieved by judicious combination of Keep codes and selecting Do not break paragraphs. If on the last line of each paragraph you put a (+Keep3) code, you'll find that all the paragraphs carry over onto the new page, no matter where the page would have ended.

Producing an 'Action' column

*In the last issue of **Script**, we added a tip to the article on Writing a Thesis showing how to lay out a Bibliography. In this article, we look at some other tricks you can use to produce special layouts. For business users, we look at producing an 'action column' for use in typing an agenda in a meeting, for example. In our next issue we will show you how to justify the last line of a paragraph and how to add footnotes.*

Adding an 'action column'

Putting a note in the left margin, such as a section number on the first line of a paragraph, has always been easy in LocoScript 2. The Indent Tab (→ – produced by holding down **ALT** and pressing **TAB**) lets you shift an entire paragraph to the right. Adding text in the left margin is then simply a matter of positioning the cursor in front of the Indent Tab and typing the text.

Adding text in the *right* margin is not quite so easy but, by a judicious use of layouts, it is possible to produce the effect of an 'action column'.

There are three places you might want to put text in the right margin. Firstly you could add notes in the margin next to the first line of the paragraph. Secondly, you could add it at the end of the paragraph, next to the last line.

Lastly, you might want it positioned somewhere between the first and last lines.

Lower Locksby Residents Association
Agenda for meeting, 25th April 1990

1. It has been confirmed that Lower Locksby has reached the second round of the 'Best-Kept Village Competition' once again. Mr Smith's litter collection has been very successful and the village green is looking much better. It has been pointed out that older residents cannot manage the work needed in their gardens and Mr Peterson is looking for keen gardeners to help him form a committee to tackle this problem. ABP

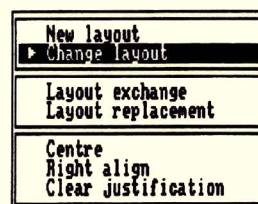
Getting any of these effects in LocoScript is simply a matter of swapping between layouts which have been set up with different margins.

As an example, we'll look at how to produce a paragraph with notes in the margin next to the first line, as shown in the example at the bottom of the page.

Setting up the layouts

What you need are two layouts – one for the main body of the text and one for the 'action column'. The best thing is to set these up as Stock Layouts – if you do, you can pull in the appropriate codes wherever you need to put a note in the margin. (For more about Stock Layouts and setting them up, you can refer to previous issues of **Script**, such as the article on layouts in Issue 7.)

The settings for the main layout you require may already be held as Stock Layout 1. Stock Layout 1 is the default layout used at the start of a document and changing the layout (using the Change Layout option on the f2 Layout menu) automatically updates Stock Layout 1.



The other layout can be set up in Stock Layout 2. The margins in this layout need to be quite different from the ones in the main layout. You can start by setting the right margin so that it's about 10 characters further to the right than the right margin of the main layout. Then set the left margin so that it's about four characters beyond the old right margin – as shown here:

To get the effect of adding a note on the same line as a line of the paragraph, you also need to use the f4 Size menu to change the line spacing in the layout. In the document you type the margin notes on a separate line. By making the line spacing 0, LocoScript is fooled into printing this text next to the last line in the main layout.

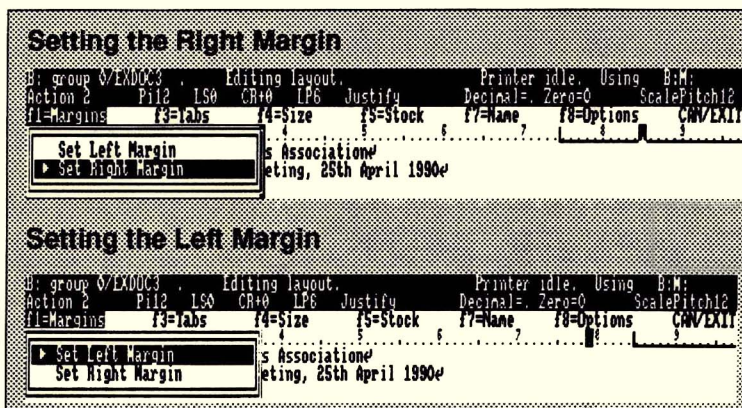
Changing the layout

Once the Stock Layouts are set up the way you want them, go back to your document and start adding the notes you want to your text.

For notes on the last line, go to the end of the last line of a paragraph, pull in a copy of Stock Layout 2 by pressing **⌘** and typing `l t 2`. You can see the effect of this more clearly if you show the codes and rulers by ticking the options on the f8 Options menu.

The new margins come into play when you add a `←` so press **⌘**. The margins in your document now change to those set in Stock Layout 2. Type the note – for example, the initials of the person taking the action. Return to your original layout by pressing **⌘** followed by `l t 1`. Press **⌘** and you are ready to continue typing the main body of the text.

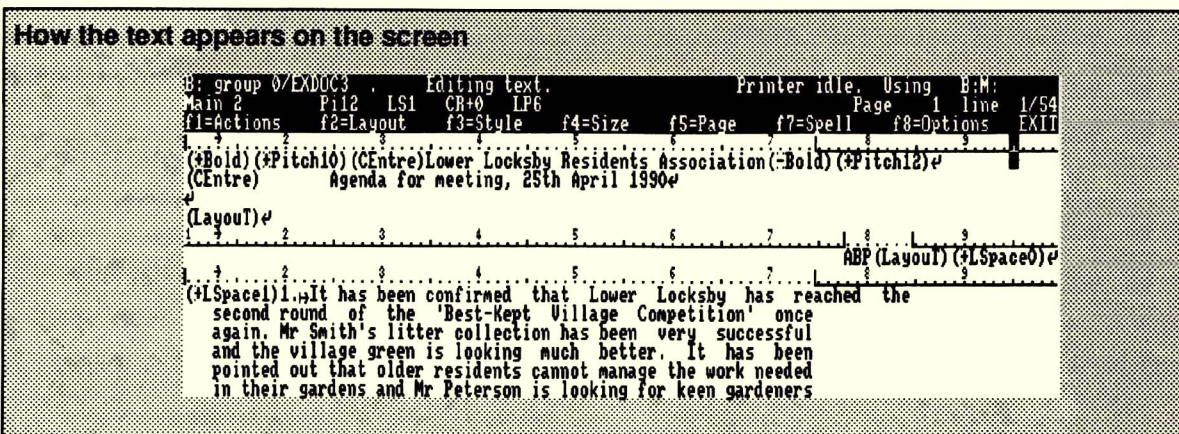
The same two Layouts can also be used to put notes in the margin next to the first line.



The main difference is that the note is inserted *before* the main text rather than after it, ie. you insert the `l t 2` code, press **⌘**, type the text for the margin, insert the `l t 1` code, press **⌘** again – and only then start typing the first line of the main text.

It is also necessary to adjust the line spacing in this case. The line spacing for the note needs to be 0, but the `l t 1` code which follows the note immediately puts the spacing back to 1. To overcome this you put a `(+LSpace0)` code after the note, and a `(+LSpace1)` code at the start of the main paragraph, as shown in the box below.

The layouts could also be used to add notes alongside a line in the middle of a paragraph. However this causes problems as the note effectively splits the paragraph into two. If the paragraph is unjustified this doesn't matter, but if it is justified, the break means that the line immediately before the note becomes unjustified, producing a very odd effect! There are ways of getting round this, but they are not easy to control. Generally if you do want notes in the middle of a paragraph, it is best not to justify your text.



Selecting records by date

Among the different types of sorting that LocoFile allows is the facility for sorting by date. As there's no standard format for writing dates, you have a choice about the type of sorting you use. For example, you can sort in day month year order or month day year or even year month day. We've also included two other formats – day month and month day – so that you can sort a list by date of birth!

In this article we show you how to use LocoMail to produce a birthday reminder list by selecting a group of records sorted to birthdate order.

Suppose you keep details of your friends in a LocoFile datafile and want to extract the names of all those with birthdays between certain dates in order to send them cards. Each record in the datafile will hold details such as a name and address. You'll also need an item for the date of birth.

For example:

TITLE	FIRSTNAME	SURNAME
ADDRESS		
BIRTHDATE		

Once the information is there and in the format you need, the next step is to consider the LocoMail instructions to fetch the records between specific dates.

One way of doing this is to use wild cards. Say you wanted to select all those who had birthdays in June. The birthdays might be kept in the format dd/mm/yy and you might have a range of dates such as 05/06/59, 22/06/60, 14/07/58 and so on. All you're interested in is

those dates with a month of 06. You can use LocoMail's wild card character * to represent an unknown number of characters, so you can ignore the day and the year. For example, the statement `#date="*/06/*"<: instructions:>` lets you process only the records where the date has the month 06.

If you keep your records in a LocoMail datafile this is the only way you can pick out a range of dates. But there are two disadvantages to this approach. Firstly, you have to work right through the datafile from beginning to end, discarding those records you don't want.

Secondly, if the required range of dates is not as simple as all the days in a particular month, the LocoMail program becomes much more complicated. For example, to pick out all the birthdays between 22/05 and 21/06 you need a much longer LocoMail instruction:

```
#date="22/05/*" or date="23/05/*" or  
date="24/05/*"... or date="21/06/*":  
<: select record:>
```

As we'll explain later you can't tell LocoMail that one date is 'greater than' or 'less than' another date so you would have to type in all the dates you wanted to check. It would be possible to improve this a bit with some more wild cards but you can imagine how unwieldy the program will get.

A much better solution is to use a LocoFile datafile with a suitable date index. Then you need only work through the records you want to select and you can pick out any range of dates without altering the program at all. We explain how this works.

Choosing date sorting

You start by creating a suitable index for the date item. (For the keystrokes to set up an index, see Chapter 9 of the LocoFile User Guide.) The type of date sorting you select is important. You might store the dates in the form dd/mm/yy, so to ensure that the birthdates are ordered correctly, you would need to select the Day/Month sorting. This means that the year is ignored even if you have included it in the date. It's this type of index which lets you pick out the birthdays which fall between the two dates.

By setting up an index on the date item, you can sort all the records automatically into birthdate order. The instruction to select the index in the LocoMail master is `$="birthdate"` where `birthdate` is the name of the index.

Starting from the first date

The next step is to find the records between two specified dates. Finding the first record in the range of dates is simple enough. Once the records are in date order you can jump to the first date simply by adding a `$$` instruction. For example, if you want to pick out all those with birthdays between 22 May and 21 June, the command you need is `$$"22/05"`. (For a more detailed description of how the `$=` and `$$` commands work, you can refer to the article 'Printing lists the LocoMail way' in Issue 9 of *Script*.) The problem is finding out when you've reached the last date in the given range.

Stopping at the last date

You might think you could simply compare dates and, when the comparison was true, finish the merge. For example, `#current_date > 21/06:<:.. instructions to end merge..:>`. The problem with this approach is that LocoMail can't easily compare one date with another. Whereas you can use the 'greater than' (`>`) or 'less than' (`<`) conditions on numeric values, these conditions can't be used with dates in

of the formats LocoFile allows. For example, if you store dates in the format `mm`, LocoMail won't allow a 'greater than' or 'less than' comparison because the date isn't a number – it's text. If you keep dates as pure numbers, you can make such a comparison but it won't always give the right results. For example, asking whether 0107 is greater than 3006 won't give the answer you want!

All you can use on text are the 'equal to' (`=`) or 'not equal to' (`≠`) conditions. With this type of condition, you can test whether the current date equals the first date after the required range. If you know what the date is, the instruction is simple enough:

```
#current_date = known_date:<:.. instructions  
to end merge..:>
```

But this only works if there is a record for the first unwanted day which is very unlikely. So what you want to do is to find out which record comes immediately after the range and LocoFile can do this.

The foolproof method is to use the `$$` command to jump to the first record after 21/06 – for example, `$$"22/06"`. This method works because of the way LocoMail copes when it can't find a match. If LocoMail can't find a record with the exact date you specified it finds the record that would have appeared directly after that record.

So if a record with the date 22/06 exists, that's fine. If it doesn't LocoMail simply moves to the first record after that in date order, say 23/06, or 24/06 etc. The actual date of the record is not important – all you're interested in is finding the next record in date order after 21/06. Once LocoMail finds the record, it's a matter of storing the date in an item-name – for example, `stopdate=birthdate`. (In fact, you could store any unique piece of information about the record – it doesn't have to be the date.) Then you're ready to fetch the records, comparing each date with `stopdate`. As soon as the date in the record matches `stopdate`, you've got all the records you wanted and you can finish the merge. This even works when there are no records in your file after the chosen date.

The master document

Building a suitable LocoMail program to pick out a range of dates can be done with the following steps:

⇒ The first thing to do is give LocoMail the two important dates: the start date in the range and the date used to end the merge – in other words the date which appears immediately after the last date in the required range. You could set up the dates in the program with the instruction `startdate="22/05"`. But getting LocoMail to prompt you for the dates and store them under item-names is more useful in the long run:

```
startdate=?
enddate=?
```

By prompting, you can pick out different ranges of dates without making any changes to the program.

⇒ The next step is to select the date index, find the date needed to stop the merge and store it under an item-name. For example:

```
$="birthdate"
$$ enddate
stopdate=birthdate
```

⇒ After the `$$ enddate` instruction, LocoMail is positioned at the end of the range of records you want to select, so before fetching the records, you need another `$$` command to position LocoMail at the start of the range.

```
$$ startdate
```

⇒ The last step is to put together the instructions to fetch the records and include them in a loop.

```
dateloop="
#birthdate=stopdate
<
exit=0
><
birthdate:tab:firstname:sp:surname:cr
>
$+
"
exit=1
%dateloop@exit
```

We've looked at loops in previous issues of *Script* but if you are unfamiliar with them, refer to Chapter 9 of the LocoMail User Guide for more details.

The LocoMail master document

```
(+Mail)tab="→":sp=" ":cr="
"
startdate=?; Enter date to start search
enddate=?; Enter date to end search
$="Birthdate"; select date index
$$ enddate; find first record after range
stopdate=birthdate; store date
$$$startdate; jump to first date in range
dateloop="
#birthdate=stopdate
<
exit=0
><
birthdate:tab:firstname:sp:surname:cr
>
$+
"
exit=1
%dateloop@exit
(-Mail)
```

Merging the master document

```
(+Mail) Enter date to end search (-Mail) 22/6
$="Birthdate"; select date index
$$ enddate; find first record after range
stopdate=birthdate; store date
$$$startdate; jump to first date in range
dateloop="
#birthdate=stopdate
<
exit=0
><
birthdate:tab:firstname:sp:surname:cr
>
$+
"
exit=1
%dateloop@exit
(-Mail)
```

Printing the result

Merge documents.		Printer idle.	Using M:					
1	PIP5	ISI:	CR+0	LP6	Page	1	line	5/
s	f2=Layout	f3=Style	f4=Size	f5=Page	f7=Spell	f8=Options	EX	
28/5/60,		Sally Eccles						edit result
2/6/65,		Bill Bloggs						Print result
15/6/62,		Bernard Smith						Save result
								Save and Print result
								Discard result
								Abandon LocoMail

Printing addresses

Whenever you write a letter using LocoScript 2, you will also want to address it. If it's a one-off letter to a friend, you may simply put an envelope in the printer and print the address from details stored in a document. If, on the other hand, you want to produce a mailshot for business purposes, feeding in a series of envelopes is not the ideal solution. A quicker and more efficient way of addressing lots of envelopes is to use labels stationery.

This article is the first in a two part series on printing addresses. In this issue, we look at ways of printing directly onto envelopes. There are a number of different ways you can do this and we explain each of them so that you can pick the one that suits you best. In the next issue, we look at printing addresses on labels, both single labels and n-across labels.

Before looking at the different ways of setting up LocoScript to print an address, there are some practical constraints to consider.

Envelopes tend to be thicker than the paper you use to print the letter. This means that not all types of envelopes will necessarily be suitable for use with all types of printer.

For example, the built-in printer for the PCW8256/8512 printer cannot handle most types of envelopes - if you try and print on the envelope, it may not feed through properly with the result that one line of an address may print on top of the previous line. This is a physical limitation of the printer and there is nothing the software can do to overcome the problem. With the PCW9512 built-in daisywheel printer, there is no problem handling most types of envelopes.

Other printers vary in their capabilities and we cannot comment here on those printers which can or can't print successfully on envelopes. If you want to print straight onto an envelope you should check that your printer can handle envelopes without problem.

With printers that can handle envelopes, there are three different ways you could set up LocoScript to print an address. Firstly, you

could keep an address (or addresses) in separate pages in a LocoScript document and then print the page of the document which has the address you need. The second method involves the use of the Direct Printing facility. Thirdly, if you have LocoFile, you can print the address directly from LocoFile onto the envelope.

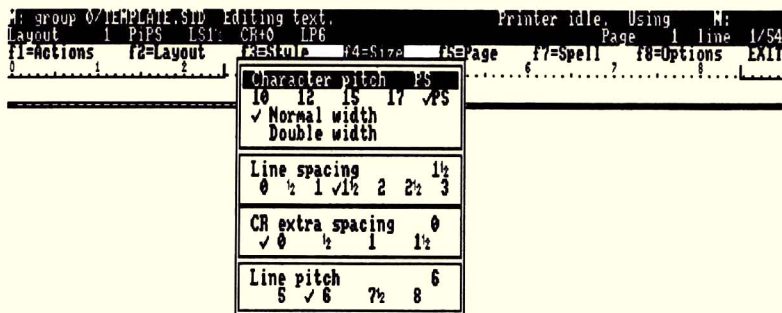
The best method to use is the one that requires the least effort from you! This in turn depends on how far you can set up LocoScript so that much of the work of is done for you automatically. We'll explain how each method helps you do this.

Printing from a document

The advantage of printing an address from a document is that you can set up a template with suitable details for printing on envelopes. Every document you create using this template will be ready-made for printing your addresses.

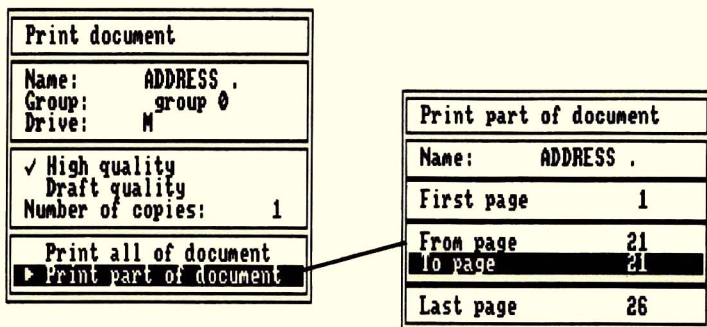
A template is simply a document you have named TEMPLATE.STD. We've looked at templates in previous issues of *Script* but, to recap, they let you pre-set a great deal of information about the document. For example, you can set a suitable left margin so you can be

sure that your address will always appear in the right place on the envelope. Other important details include the Character pitch and Line Spacing used (set up either in a Layout or as (+Pitchnn) and (+LSpacenn) codes in the document).



If you want to address the envelope in a particular typestyle, say in a Copperplate font for party invitations or in Sans Serif for a more serious business letter, you can also set up the template with the appropriate Character Set in the f6 Printing menu in Document Set-up.

Alternatively, you can keep lots of addresses in one document providing you keep each address on a separate page. Then it is simply a matter of printing the appropriate page using the 'Print part of document' option on the Print menu.



Another point to note is that you don't need a special Paper Type just for envelopes. Providing the Paper Type you use has a larger Height setting than the height of the envelope, the form feed (↓) at the end of each address will be enough to eject the envelope from the printer once the address is printed.

The drawback to this method is that if you do keep a number of addresses in one document, you may have to scroll through lots of pages just to find the page with the address you want to print. LocoFile provides a solution to this problem as we'll see later on.

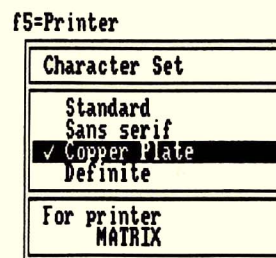
Direct printing

If you tend to print one-off addresses every now and then which you don't re-use, you might consider Direct printing. The Direct printing facility lets you pretend your PCW is a typewriter. You can use this to print addresses. Because Direct printing is designed to be simple like a typewriter, there is not the same scope for setting up details such as the margins you want to use in advance as there is with a LocoScript 2 document.

When you go into Direct Printing, the screen looks similar to a new LocoScript document. However, there are important differences. There are fewer menus and you can't alter any of the default settings in these menus as you can in documents.

For example, you can use the f2 Layout menu to change the margins, tabs, Character pitch etc. But as soon as you leave Direct Printing, the changes are forgotten. This means that if you don't want to work with the default margin, Character pitch and Line Spacing etc for your address, you have to spend time changing these settings every time you go into Direct Printing to print an address.

In addition, you can't set up the font you want to use as the default. To print in the font of your choice from Direct Printing, you must first set it as the current Character Set in the f5 Printer menu in Printer Control State.



If you decide that Direct Printing is the method you want to use there are a number of short cuts you can take. For example, instead of changing the margins in the f2 Layout menu in Direct Printing, you could position the text by changing the Left Offset. To do this, press [PTR] and then press f6 Left Offset. Type a suitable figure such as 25 and press [ENTER]. The

printhead moves over to this position, ready to print. (You can adjust this using the Increase/Decrease offset options).

f6=Left Offset

Left offset	25
Clear offset	
Increase offset	
Decrease offset	
EXIT	

Press **EXIT**, **ENTER** and **EXIT** to leave the Printer Control State and then type D to go into the Direct Printing screen.

There is also a quick way of altering the Character pitch and Line spacing. If you store suitable (+Pitchnn) and (+LSpacenn) codes in a phrase, you can simply paste in the phrase with a couple of keystrokes rather than use the Set menu or the f2 Layout menu to alter these settings.

The LocoFile solution

With LocoFile, you can combine the advantage of pre-setting details such as the Character pitch and Character Set with ability to find and print a single address with ease.

As you'll know from earlier issues of *Script*, LocoFile is the database that works with LocoScript 2. It lets you keep information in sorted order and is ideal for storing addresses. In addition it has simple printing facilities,

tailor-made for printing addresses onto envelopes or any other media you want to use.

Like LocoScript 2 documents, you can set up LocoFile datafiles with details such as the Character pitch and the Line Spacing etc. You can also select the font of your choice in Datafile Setup. Another setting lets you adjust the Left margin so that the addresses print in the right place on the envelope.

What makes LocoFile much easier to use than a LocoScript document is the way you can jump directly to the address of your choice. LocoFile lets you set up an index for any item. For example, a useful index for an address list would be one where you could search on the surname and, where two or more people with the same surname are included in the list, on the initials. This means that you could pick out W Shakespeare from all the other Shakespeares in the address list. After selecting such an index on the f2 Index menu, you simply need to use the f5 Goto menu to find the address.

Once the address is displayed on the screen, you can print it by pressing the f4 Print menu and selecting 'Current record' and the Extract option. (The 'Whole record' option would print out the information in the way it is laid out on the card). Just tick the items you want to print and press **ENTER**.

The LocoFile solution

f5=Card

Card width	60
Card height	15
Left margin	25
Character pitch	
✓ 10	12 15 17
Line pitch	
5	✓ 6 7½ 8
▶ Use this format	
Select paper	

f6=Printing

Printer selection	
◆ Character Style	Standard PS
Character Set	
Copper Plate	
Printer	
MATRIX	
EXIT	

ADDRESS.DAT	Locofile.	Printer idle.	Using
ne	Unique	Item: None	Col: 17
f2=Index		f3=Item	f4=Print
f5=Goto		f6=Find	f7=Extract
f8=			
Record: 1			
Title	Initials	Surname	
Mr	W	Shakespeare	
Address			
11 Bath Road			
Stratford-upon-Avon			
Warwickshire.			

Print extract	
✓ file	
✓ Initials	
✓ Surname	
✓ Address	
▶ Print	
Select all	
Select none	

Print records	
All records	
"Changed" records	
✓	Current record
✓	High Quality
	Draft Quality
Whole record	
▶	Extract

Letters

Greek characters in LocoFile

While using LocoFile yesterday, to extract some addresses, I proceeded as usual by turning to the Goto menu, and keying in the desired name. To my sheer astonishment, the name displayed in the top section of the menu, appeared in characters of the Greek alphabet! I tried this several times, using various names, but all were displayed in Greek, and none availed to identify the required record, giving, instead, the "No match found" signal.

I tried an exit from the file, but returned to find the Greek characters were still there. Eventually I switched off and re-loaded, which restored LocoFile to normal functioning. I am most curious to know what I may have done to achieve this extraordinary variation.

Rev IR, Durham

We think you accidentally went into the Greek Super Shift. This is done by pressing **ALT and **F8** and the effect is to replace the normal keyboard layout with one which has the Greek characters. When you are in the Greek Super Shift the letters Gre appears on the top right hand corner of the screen.**

There is no need to reload the software to get out of the Greek keyboard. Simply pressing **ALT and **F7** will restore the normal keyboard. The different Super Shifts are described in Appendix III of the LocoScript 2 User Guide.**

Standard vs Sans Serif

I make use of the sans serif font high quality for most of my work. Where I am producing lecture notes however I use draft quality for speed of printing. I note that these are always produced in standard font, even though you are apparently given the option of either font on the menu prior to printing, and although you may select sans serif if this is ignored. Even after removing the MATRIX.#ST from the start of day disc, draft quality is still printed in standard font.

I should appreciate your confirmation that even with Sans Serif font selected, draft quality will always be in standard font, as I can find no reference to this in any manual or *Script*.

Mr JR, Cambridge

There's little difference between Standard and Sans Serif when you print in Draft Quality – the different style is only evident in High Quality.

In Draft Quality, only half the number of dots are used to print each character. With such limited character patterns, there's not the same scope for designing different styles as there is in High Quality. So we concentrate on producing characters with as clear a definition as possible. In fact if you look closely, you'll find that Draft Quality is not strictly a 'Standard' style as it produces a mixture of serifed and unserifed characters.

Driving a NEC P6 Plus

I've recently bought a NEC P6 Plus printer and found that I can get a reasonable print out using the LQ1500.PRI file on the master LocoScript 2 disc. However, I can't get the printer to produce PS from this driver even though the printer manual suggests that it can do this.

I would therefore like to know whether you have a better driver for this printer. I can give you more details of the printer if you need them.

Mr KP, Leeds

We do indeed have a better Printer file for the NEC P6 Plus printer. The Printer files we supply on the LocoScript 2 master disc support many of the popular printers. As you have found they can also be used to provide basic support for other makes of printer.

To get the best support available for many printers (including the NEC P6 Plus), you need the Printer Drivers Disc. This disc has dedicated Printer files for all the printers we support – the Printer file you need is the NECP6X.PRI.

The NEC P6 Plus is a 24 pin printer and is one of the printers we support with the 24 Pin Printer Drivers Disc. With this disc, you can produce the entire LocoScript character set on your printer – something you could only previously do on the PCW8256/8512 printer. (See the News pages of Issue 7 of *Script* for more details.)

Letters

Printing documents in different fonts

I am delighted to have 500+k in my memory, thanks to the SCA Rampac you sent, and pleased too, with the extra fonts in Set 2. However, one problem you can I hope help me with.

Penman looks beautiful. However, I followed the advice in the leaflet about setting the Character pitch to PS and the Scale pitch to 15 but the text refuses to reach the right margin.

Mr BE, Chesterfield

We suspect that the problem with the Penman font is caused by not setting up the document for this font. (You set up a document by selecting the font on the f6 Printing menu in Document Set-up. This is done by pressing f6 Printing, moving the cursor to Character Set and pressing **[ENTER]**. On the menu displayed, put a tick beside the font and press **[ENTER]**.)

LocoScript calculates where to break the lines from information about the font it is expecting to print in. It doesn't change these line breaks when you print the document in another font.

The PS widths can vary considerably from font to font. For example, PS widths of the Standard font are wider than the Penman font. So, setting up a document for the Standard font but printing it in the Penman font means that unjustified text will fall short of the right margin. (Justified text will reach the right hand margin but the spaces between the words will be much wider, giving an odd effect.)

By always setting up documents for the font you want to print them in, you can avoid this problem altogether.

Printing in the wrong place

If I use the direct printing facility and then decide to print a document in the usual way, I find that sometimes the text starts printing in the wrong place. This doesn't always happen – can you tell me what I am doing wrong?

Mr RM, Gosforth

When you leave Direct Printing, the printhead remains at the same position and the Top of Form position is not reset to 0. So if you print a document immediately after leaving Direct Printing, LocoScript will start printing from the next line on the paper.

You don't need to reload the software to ensure your next document prints correctly.

To restore the Top of Form position to 0 and position the paper in the right place, you can use the Feed to top of form option on the f1 Actions menu in Printer Control State.

If you are in the middle of a sheet of paper, press **[PTR]** followed by f1 Actions. Select the option Feed to top of form and press **[ENTER]**. If you're using single sheet paper, this action ejects the paper and you can put a new sheet of paper in. With continuous stationery, the paper is fed through until the printhead is positioned at the top of the next page, ready to start printing.

Screen dumping

I recently purchased a Star LC24-10 Multi-Font printer which I have been using quite successfully with my Amstrad PCW8512 along with LocoScript 2.28 and your 24 pin Printer Drivers Disc.

The problem I refer to is that I do not seem to be able to dump the information of the Disc Manager Screen to the Star printer using the EXTRA + PTR keystrokes as I could when using the built-in printer.

Mr GH, Manchester

It's not possible to produce a screen dump on your Star LC24-10 printer from the PCW. The screen dump facility only works with the built-in printer. (It was originally included just so that we could illustrate the User Guides!)

Unfortunately, as external printers vary so widely in their graphics abilities it is not feasible for us to include the screen dumping facility for other printers.

Letters

Drive M and the RamPac

I have received the RamPac and have installed it on my PCW8512. I was given to understand that when installed there should be 880k on the M drive. My disc manager screen reports 72k used and 720k free and underneath lists, under Group 0, LOCOSPEL.DCT 68k; 2 hidden 4k.

I tried again with another Start-of-day disc, and the total of the M drive was still 792k. Can you please explain what has happened.

Mrs MD, Gateshead

Your PCW is displaying the correct values of available memory for Drive M for your PCW with the RamPac attached. The 880k quoted for the RamPac is the amount of memory available when you load CP/M.

When you load LocoScript, the files that LocoScript needs are copied from your Start-of-day disc into memory. The space left over is called Drive M. LocoScript then copies support files on your disc such as templates, Printer files, LocoSpell dictionaries etc, into Drive M.

The values of free and used space depend on two things: the add-ons you have installed on your Start-of-day disc and the support files you have loaded. For example, adding LocoFile to your system means that there is 24k less memory left over in Drive M, while the dictionary needed for LocoSpell takes up 68k.

Adding a RamPac to your PCW adds 512k to the size of Drive M. So as your Drive M used to be 280k, it has now become 280k + 512k = 792k with the RamPac.

Using LocoFont 1 & 2

Using my disc labelled LocoFont Set 2 Drive B Start-up disc, I am able to program it into 'M' but the style names do not appear when I call them up using f6. Therefore, I have not been able to print with any of them, although I have had no problem with Set 1.

Mrs IMP, Leatherhead

We think your problem is caused by the fact that you have used up the quota of Character Sets allowed in the Character Set menu.

If you have updated your Settings file with all the fonts from LocoFont Set 1, there is no more room for the fonts on the LocoFont Set 2. The best thing to do is to keep only the fonts you want to use from both LocoFont 1 and LocoFont 2 and remove those you don't usually use.

If you have a lot of space on Drive M, there is an alternative solution. You could put two printer files on your Start-of-day disc – MATRIX.PRI and MATRIX2.PRI.

MATRIX2.PRI will simply be a copy of MATRIX.PRI, renamed to MATRIX2.PRI. (MATRIX.PRI is a hidden file, so you will need to show the Hidden files by ticking the option on the f8 Options menu.) Once this is done, copy the LocoFont 2 files onto group 0 of your Drive B start up disc, renaming each of them as follows:

MATRIX2.#MF, MATRIX2.#MP.... and so on.

Finally, reload LocoScript and update the Settings file using the f6 Settings menu. When you want to print with one of these fonts, you should select MATRIX2 as the printer on the f6 Printing menu and then the Character Set of your choice.

Starting up

A tip that your readers may find of use. I often need to use my 9512 quickly, perhaps for one brief note. I have therefore made a 'Quick Startup' disc, denuded of LocoSpell, LocoMail, LocoFile and any other file not directly required to start the machine. This will get me going without what can seem to be an interminable wait when one is in a hurry.

Mr IL, Kenton

Thank you for your tip.

You can find more hints and tips about organising start-up discs in the article 'Introducing LocoScript 2.20' in Issue 8 of *Script*.

Letters

Importing ASCII files

I want to take a datafile from a CP/M disc and import it into LocoFile. However, the data contains Greek characters and these characters get lost as soon as I insert the ASCII file into my LocoFile datafile. Is there anything I can do about this?

Mr LD, Eastbourne

When importing an ASCII file into a LocoScript document or LocoFile datafile, LocoScript uses a variant of the appropriate national language CP/M character set. (You can find full details of the section on the CP/M Operating System in the User Guide supplied with your machine.)

The variation is that the character values #80 to #9F in the ASCII file are treated as if they were ASCII characters #00 to #1F. These relocated characters include a small number of Greek characters but if the characters you want are not there, it's not possible to insert them into a datafile from an ASCII file.

The easiest way for you to see which character value maps to which character is probably to produce a file with the character values #20 to #FF in it (by using a simple BASIC program) and then use Insert Text to import it into a LocoScript document.

It may be helpful to know that other national language versions of LocoScript produce slightly different arrangements of the characters. This means that the common characters in the national language versions (such as é and ü for say French and German) are translated rather than their English equivalents.

If you are thinking of upgrading to a PC, you'll find that this problem disappears. With LocoScript PC, there are import and export options which lets you transfer a much wider range of characters between LocoScript PC and other software packages.

Swapping foreign keyboards

I have a French PCW9512 and want to be able to check the spelling of work in English but without having to type QWERTY which is now quite beyond me as I always use AZERTY and using my present French printwheels which have all the characters I use in English.

I imagine I need to order the English Foreign Pack and perhaps, or perhaps not, the Keyboards and Printwheels discs.

Mr JL, France

As you cannot mix and match different national language versions of LocoScript and LocoSpell, you do need to order the English Foreign Pack to spellcheck in English. However, you'll be glad to know that, providing both versions are v2.12 or later, this is the only extra software you need to type, spellcheck and print documents in English.

Since version 2.12 of LocoScript, keyboard files are interchangeable. So to continue

using your AZERTY keyboard, you simply have to copy the KEYBOARD.JOY file from your French master disc onto your English Start-of-day disc. (The KEYBOARD.JOY file may be a hidden file, so make sure you show the hidden files by ticking this option on the f8 Options menu on the Disc Manager Screen.)

As long as both versions are later than v2.12, you can also continue to use your French printwheel by copying the PCW9512 Printer file from your French master disc onto your English Start-of-day disc. Again PCW9512.PRI may be a hidden file.

For more information about our support for different national languages, you can refer to the article 'Using Different Languages' in Issue 12 of *Script*.

PostScript

Howard Fisher reports back from showing LocoScript in the USSR

LocoScript 2 with its full support of the Cyrillic alphabet combined with the inexpensive PCW offers a very cheap solution for word processing in Russian. But surprisingly, the PCW has never really been exported to the USSR in any quantity. So, when we heard about the "Comtek 90" personal computers exhibition in Moscow we jumped at the chance to both show off our software and learn something about computing in the Soviet Union.

What we didn't expect was that the show would be open to any Soviet Citizen who could afford the entrance fee of 20 kopeks (20p at the "commercial" exchange rate, 2p at the "tourist" rate). Nor did we expect entrance queues stretching into the distance, with waiting times of over 2 hours – even in the snow!

Even in the mornings, when admission was restricted to invited specialists, the show was crowded. With just myself and Ian Brown from Locomotive on the stand, sharing Lucy our interpreter, life was hectic if more than one non-English speaking group of visitors ventured onto the stand. We had been advised before the show to block off one of the two open sides to the stand, and it didn't take us too long to erect a barricade across the other side – just to keep some kind of order. Indeed, by the end of the show every stand had two or more chairs blocking its entrance!

We soon discovered that leaflets were prized souvenirs, and that it was a mistake to leave them for just anyone to take. If we had, we'd have had none left at the end of the first day, with seven days left of the show! So we fastened a few leaflets to the table with adhesive tape, only giving copies away when asked specifically for our "prospekt". Even so, at the end of the show we had to give away even these last few leaflets (after unsticking them from the table!).

Judging by the other products on show, it was clear that no popular word processors can touch LocoScript for word processing in foreign languages – either on the cheap PCW or on a PC.

We are now following up the contacts we made at the show. It is almost certain that there will be a full Russian version of LocoScript in the not too distant future!

On the lighter side, the show wasn't all work. In particular, we took with us some LocoScript pens we'd had specially printed to give to important visitors to the stand. These proved irresistible to the young Muscovites visiting in the afternoons. So much so that we rationed the pens to those who could swap interesting badges (badges are almost an obsession with the Russians – young and old).

The result was that we came back with a collection of badges second to none (but chose not to try to take these through the airport's metal detectors!)