

Issue 2
Jan 88

Script

**The LocoScript
Newsletter**

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In this issue of *Script* we are focussing on LocoChar – the program that lets you replace some of LocoScript's characters with characters of your own design.

The LocoChar program was one of the new features of LocoScript version 2.12 and so has only been available for a couple of months. But already quite a number of you have experimented successfully with it – producing everything from musical notation (sharps, flats, treble and bass clefs etc) to Christmas motifs. One gentleman is even selling his designs on disc! We shall be publishing some of the more interesting designs in a future issue of *Script*.

The main article on LocoChar has been written by the person who wrote the LocoChar program and it describes how to produce the simple graphics characters you need to print boxes and flowcharts. Trying to print these diagrams using the standard range of LocoScript characters generally gives you a rather unsightly result – as those of you that have tried will know!

The other articles in this issue continue themes that we started in earlier issues – Layouts and LocoMail. The Layout article looks at how to update the Layout codes in a document to match a new set of Stock Layouts (by using LocoScript's Layout Replacement and Layout Exchange options). The LocoMail article is in response to the frequent requests we receive in our mail for a way of sorting LocoMail data files (address lists, in particular) into alphabetical order.

Sorting a data file involves using CP/M, the operating system supplied with your machine, to run a BASIC program which sorts the data in the order you specify. Don't worry if you are unfamiliar with CP/M or have never written a program in BASIC. We've provided a listing of the complete program, plus instructions on how to type it in, correct any typing errors and actually run the program.

In fact, we've made it even easier for you to use by producing a disc with the program on it. This disc costs £9.95 and also contains the latest version of Locomotive's Mallard BASIC.

News

Printer Support

Until version 2.12 of LocoScript, you could only print your documents on D630 compatible daisy-wheel printers or FX80 compatible dot-matrix printers (and of course the built-in printer). With version 2.12, we improved the existing Printer Files for these printers and added many new Printer Files to support a much wider range of printers. We are continually expanding the range of printers we support – to such an extent that we are now unable to fit all the Printer Files onto the LocoScript 2 master disc!

Most people only require the Printer Files that support the commonest types of printer – so these are the ones that are supplied on the LocoScript 2 master disc. For people with more unusual printers, we've produced the Extra Printer Drivers Disc (for PCW8256/8512 owners) and the Printer Drivers and Character Sets Disc (for PCW9512 owners).

Both these discs contain copies of all the Printer Files we have produced and so cover a number of printers that aren't supported by the files on the LocoScript 2 master disc. For example, they contain files for the Hewlett-Packard Laserjet printer and for the IBM Proprinter and Graphics Printer. We have recently added the NEC P6 series of dot-matrix printers and the Epson GQ3500 laser printer to the range supported by these discs.

If you want to know whether you can use your printer with LocoScript, the first thing you should do is tell us the name of the printer. We'll look up your printer on our list and, if it's mentioned, we'll tell you the name of the Printer Files you need and whether these are on the LocoScript 2 disc or on the Extra Printer Drivers Disc. All you will have to do is either upgrade your disc to the latest version (there is a £5 handling charge for this) or purchase either the Extra Printer Drivers Disc or the Printer Drivers and Character Sets Disc (depending on the machine you are using).

If your printer is not on the list of ones we currently support, this doesn't necessarily mean you can't use it with LocoScript. But to find out, you'll probably have to send us the technical manual for your printer so that we can work out which of our Printer Files is most suitable. We will, of course, return your manual when we have finished with it.

The Extra Printer Drivers Disc and the Printer Drivers and Character Sets Disc each cost £14.95. Note: These require LocoScript version 2.12 or later. The latest version is supplied on the PCW9512 discs and is available as a free upgrade with the PCW8256/8512 versions.

US version of LocoScript 2

The US version of LocoScript 2 is available in the United States from Datamension. They are currently selling LocoScript 2 and LocoSpell together for \$79.95. This package also includes four separate manuals and booklets to help users, including an aid to translating from English! The LocoScript 2 and LocoSpell User Guides are, of course, provided: in addition, Datamension supply an Introduction to using LocoScript 2 and a Quick-Reference guide.

2

LocoScript 2 and LocoSpell

Recent price reductions at Locomotive have meant that you can now buy LocoSpell for LocoScript 2 for just £19.95 and LocoMail for LocoScript 2 at a cost of £29.95. We have also decided to sell LocoScript 2 and LocoSpell together and you can purchase this package for just £34.90.

You will soon be able to buy LocoScript 2 in your local high street. Within the next couple of weeks, it will go on sale in Dixons – the nationwide chain of electrical goods stores. It will be available in about 70 of the larger branches which have computer and business sections.

The LocoMail User Guide

We are currently producing a new User Guide specifically for the version of LocoMail used with LocoScript 2. This explains LocoMail's capabilities in greater detail than the original manual. It also looks at LocoMail much more from the point of view of the person who wants to use information stored on disc in letters and invoices.

The new User Guide has four sections:

- I Getting Started: which describes how to install LocoMail and then demonstrates in a tutorial how to merge information on disc into letters.
- II Using LocoMail: which describes the basic steps in setting up and using master documents and data files.
- III Advanced Features: which looks at the subtler ways LocoMail can use data files and master documents – through some special LocoMail instructions.
- IV Applications: which looks in detail at some typical LocoMail tasks – invoicing, handling enquiries (for example about houses for sale), helping club secretaries with their paperwork and producing address labels.

The new User Guide should be ready at the end of February and, from then on, will automatically be supplied to anyone purchasing LocoMail.

If you already have LocoMail, you can buy copies of the new User Guide at £14.95 each from Locomotive Systems. You may also be interested in having copies of the new example documents – in particular, the example applications – on disc: these can be purchased for £5, also from Locomotive Systems.

• Many of our customers want to use the advanced features of LocoMail to produce specific applications, for example, selecting a number of items of information from a file and then producing a report. However, not all of our users have programming experience and quite often they cannot spare the time to learn enough to set up their system.

Unfortunately, we have limited resources in our technical support department for helping people put their more complex applications into operation. We would, therefore, be interested to hear from anyone who has experience of using LocoMail's advanced facilities and who could offer a reasonably priced consultancy service to less experienced users.

Attention all Welsh speakers!

Fe fydd fersiwn iaeth Gymraeg o LocoScript 2 i'w gael cyn bo hir, am £29.95. Mae'r ddewislennau i gyd yn yr iaeth Gymraeg.

LOCOCHAR – An Introduction

LocoChar is a special program that lets you redesign 16 of LocoScript 2's characters, show these characters on the screen and print them on the PCW8256/8512's built-in printer. We've only been supplying this program on the LocoScript 2 master disc since we brought out version 2.12 (you need v2.12 or later to use it) and already a number of people have used it to design a wide range of special characters – even Christmas motifs!

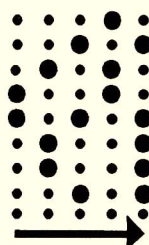
The article that follows – 'Boxing clever with LocoChar' – shows how to design and use some special graphics characters for drawing boxes and flowcharts. If you try drawing these simply with LocoScript's standard vertical bar and dash characters, they look fine on the screen but when you come to print them out you typically get unsightly gaps, particularly at the corners of boxes.

First, however, it is helpful to know a little about how LocoScript handles its characters – how it draws them on the screen, how it prints them on the built-in printer and how it stores them – because this explains why LocoChar works the way it does.

First, the screen. The PCW's screen is a rectangular grid of picture elements – or pixels – each of which can be turned on (made bright) or turned off individually. Each character on the screen is drawn by turning pixels on or off in an area 8 pixels wide and 8 pixels tall, the bright pixels forming a shape you recognise as the character. In other words, each screen character is simply a pattern of dots (marking the bright pixels) on an 8x8 grid.

Characters printed on the built-in printer are again rectangular patterns of dots, but the mechanism is somewhat different.

The part of the printer which actually prints characters is the printhead, and the important part of this is a vertical row of pins. Marks are made on the paper by 'firing' the pins in bursts, between which the printhead moves a short distance across the page. The result is as follows:



Characters are produced simply by careful choice of the pins fired in each burst.

When LocoScript prints a character, it sends a sequence of 8-bit codes to the printer, each code

telling the printer which pins to fire in each burst. There are 9 pins to fire, but so that the 1s and 0s in the code can straightforwardly be used to mean 'fire' and 'don't fire', LocoScript just uses 8 of

the pins for each character. In general it uses the top 8 pins but characters like g and y that go below the line use the bottom 8 pins.

The pins on the printhead are $\frac{1}{72}$ " apart, so that the marks made on the paper just about join up. As LocoScript only uses 8 pins at a time, the characters are at most $\frac{8}{72}$ " (ie. $\frac{1}{9}$ ") high. This figure of $\frac{1}{9}$ " is important in designing graphic characters with LocoChar, as we'll see.

The other things you need to know about printing before using LocoChar are how the various different character pitches are produced and how Draft and High Quality print are achieved.

You might expect to need a different character pattern for each character pitch, but in fact LocoScript uses the same pattern for all pitches. It just changes the speed at which the pins are fired – faster for the higher pitches, slower for the lower pitches – to give the required result. However, there is a restriction on how fast the pins are fired that makes it a general rule that the same pin can't be fired in consecutive bursts. This affects the patterns of dots that can be used to produce a character.

Draft quality print is achieved by firing eight pins in appropriate patterns all the way across the page, then going straight on to the next line. High quality is achieved in two ways: firstly, by putting

twice as many dots across the page (by moving the printhead half as fast) and secondly, by doing a second set of dots slightly below the first set – effectively, filling in the gaps in the first set. If the Draft patterns were used here, you would get a very jagged character – so LocoScript uses different patterns, the High Quality ones being four times as detailed as the Draft.

Pulling all this together, it turns out that LocoScript needs to record three patterns for each character – one for showing the character on the screen, one for Draft printing and one for High Quality printing. These patterns are held on your Start-of-day disc in the built-in printer's Printer Driver file MATRIX.PRI (a hidden file), along with other information LocoScript needs to use the printer. Most of the patterns are held in a compressed form (to save space) but 16 are kept in an uncompressed form: these are the ones you can alter. It is not possible to change any of the other characters.

LocoChar helps you to change the shape of the 16 special characters in the Printer Driver file, ie. MATRIX.PRI. To do this, it displays the current version of all three forms of each of these 16 characters and provides 'tools' to change these.

For the screen character it shows an 8x8 grid, corresponding to the 8x8 grid of pixels that will be used to display the character: blobs on the grid pick out the pixels that will be bright. For the Draft character it shows a 9x12 grid, corresponding to the 9 pins on the printhead and the 12 columns of dots that will be used to print the character. For the High Quality character it displays an 18x24 grid, with the odd numbered rows showing the pattern that will be used on the first pass along the line and the even-numbered rows showing the pattern that will be used on the second pass. For both printing characters, the blobs on the grid pick out the pins that will be fired.

Built into the program are all the rules about the patterns, so that you can only ever produce patterns that obey these rules. For example, you can only ever use the top 8 or the bottom 8 rows of the Draft grid and the top 16 or bottom 16 rows of the High Quality grid. This ensures that your pattern only needs 8 pins to print it. Similarly, placing a blob on one of the printing grids automatically clears any blob next to it on the same line – in keeping with the rule that pins can't be fired in consecutive bursts.

That's the background to LocoChar. We hope it has helped you to see what LocoChar is all about and how you might take advantage of it.

Now for a clever application...

Boxing Clever with LocoChar

Anyone who has tried to draw boxes or table grids in LocoScript documents, using hyphens, underlines and vertical bars, will know how difficult it is to make the lines join up and the corners look tidy. There are two reasons for this: firstly the hyphen, underline and bar characters are not designed to join up, and secondly the maximum height of any single character is $\frac{1}{6}$ " , whereas your lines of text will usually be spaced $\frac{1}{6}$ " apart.

If you have LocoScript version 2.12 (or later) and a couple of hours to spare, you can use LocoChar to define some special line graphic characters which can be combined to produce boxes, grids and even block diagrams or flow charts, which will be displayed on the screen and printed perfectly in Draft or High Quality modes.

Before going into the actual graphics elements you will need, a word about how they will be used. The restriction of $\frac{1}{6}$ " maximum height for printed characters applies, so we make the printer graphic elements only $\frac{1}{12}$ " high and use 6 lines per inch with half-line spacing to make them join up.

This means that for all areas in the document which contain boxes etc. you need to select half-line spacing either with the code (+LSpace $\frac{1}{2}$) or by changing to an alternative layout. Your text, whether inside or beside the boxes, should only appear on alternate (half-)lines, whereas the vertical elements of the box appear on every line.

The screen graphic patterns use the full height of the character cell to produce joined up lines on the screen display; but because of the line spacing, the vertical scale of your diagrams will appear more exaggerated on screen than when printed.

It is also advisable to set up tabs for the positions of vertical lines and use tabs rather than spaces to mark out the width of the box or table columns; this makes it much easier to change or add text without distorting the shape. If you use PS pitch then you must use tabs to line up the verticals, otherwise a box which looks good on the screen will break up when printed.

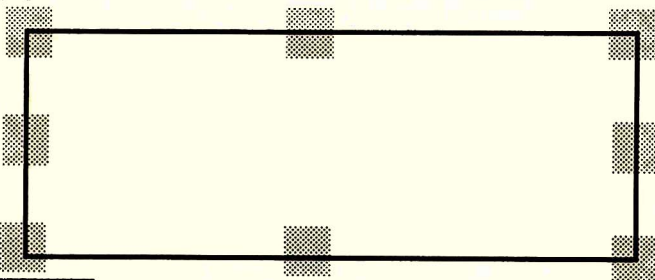
LocoChar allows you to redefine up to 16 of the standard characters, and depending on the complexity of the diagrams you want to produce, you can use all or just a few of these for line graphic elements.

Drawing simple boxes

To draw individual boxes or lines you need 6 graphic elements: a horizontal line, a vertical line and 4 corner pieces. Individually, these look like this:



These shapes can be combined into rectangular boxes from $\frac{1}{12}$ " square (assuming 12 pitch or PS) up to the whole size of the page:

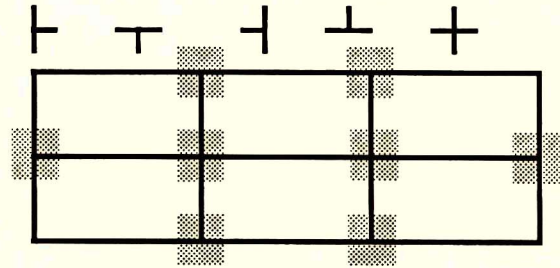


4

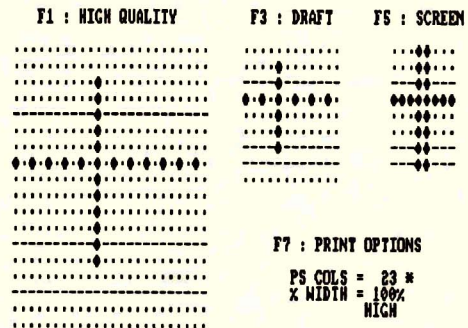
We have defined these as LocoChar characters [0] to [5], and the grid patterns from LocoChar (opposite) show the detailed designs.

More complicated boxes

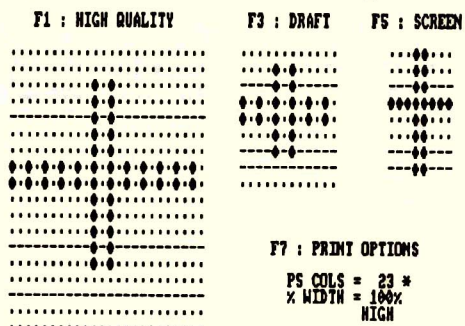
For boxes which are joined up or subdivided, table grids or block diagrams, 5 extra junction elements need to be added; these are 4 "T" pieces and a "+" piece:



These are characters [6] to [9] and [A]. Notice that the "+" piece in [A] is the key piece, each of the other 10 pieces is a subset of [A] (ie. a copy with some blobs removed but nothing added) and that is what ensures that all the junctions will line up correctly.



Below is an alternative design for the "+" piece with double thickness printed lines, and if you prefer that style you can work out the patterns for the other 10 pieces to match it. If you draw the "+" piece into [A] first and then **CUT** into the Scratchpad and **COPY** into [0] to [9], you can then edit each of [0] to [9], removing the sections which are not required.



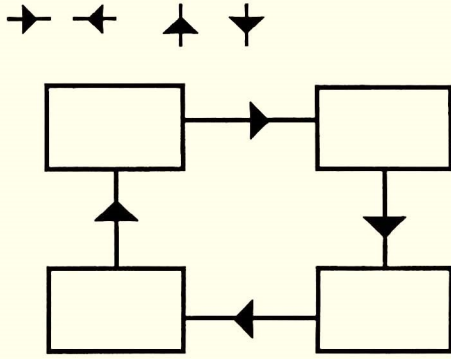
(Contd. on page 6)

Grid patterns for LocoChar characters [0] to [E]

<p>[0]</p> <p>F1 : HIGH QUALITY F3 : DRAFT F5 : SCREEN</p> <p>F7 : PRINT OPTIONS PS COLS = 23 * % WIDTH = 100% HIGH</p>	<p>[5]</p> <p>F1 : HIGH QUALITY F3 : DRAFT F5 : SCREEN</p> <p>F7 : PRINT OPTIONS PS COLS = 23 * % WIDTH = 100% HIGH</p>	<p>[A]</p> <p>F1 : HIGH QUALITY F3 : DRAFT F5 : SCREEN</p> <p>F7 : PRINT OPTIONS PS COLS = 23 * % WIDTH = 100% HIGH</p>
<p>[1]</p> <p>F1 : HIGH QUALITY F3 : DRAFT F5 : SCREEN</p> <p>F7 : PRINT OPTIONS PS COLS = 23 * % WIDTH = 100% HIGH</p>	<p>[6]</p> <p>F1 : HIGH QUALITY F3 : DRAFT F5 : SCREEN</p> <p>F7 : PRINT OPTIONS PS COLS = 23 * % WIDTH = 100% HIGH</p>	<p>[B]</p> <p>F1 : HIGH QUALITY F3 : DRAFT F5 : SCREEN</p> <p>F7 : PRINT OPTIONS PS COLS = 23 * % WIDTH = 100% HIGH</p>
<p>[2]</p> <p>F1 : HIGH QUALITY F3 : DRAFT F5 : SCREEN</p> <p>F7 : PRINT OPTIONS PS COLS = 23 * % WIDTH = 100% HIGH</p>	<p>[7]</p> <p>F1 : HIGH QUALITY F3 : DRAFT F5 : SCREEN</p> <p>F7 : PRINT OPTIONS PS COLS = 23 * % WIDTH = 100% HIGH</p>	<p>[C]</p> <p>F1 : HIGH QUALITY F3 : DRAFT F5 : SCREEN</p> <p>F7 : PRINT OPTIONS PS COLS = 23 * % WIDTH = 100% HIGH</p>
<p>[3]</p> <p>F1 : HIGH QUALITY F3 : DRAFT F5 : SCREEN</p> <p>F7 : PRINT OPTIONS PS COLS = 23 * % WIDTH = 100% HIGH</p>	<p>[8]</p> <p>F1 : HIGH QUALITY F3 : DRAFT F5 : SCREEN</p> <p>F7 : PRINT OPTIONS PS COLS = 23 * % WIDTH = 100% HIGH</p>	<p>[D]</p> <p>F1 : HIGH QUALITY F3 : DRAFT F5 : SCREEN</p> <p>F7 : PRINT OPTIONS PS COLS = 23 * % WIDTH = 100% HIGH</p>
<p>[4]</p> <p>F1 : HIGH QUALITY F3 : DRAFT F5 : SCREEN</p> <p>F7 : PRINT OPTIONS PS COLS = 23 * % WIDTH = 100% HIGH</p>	<p>[9]</p> <p>F1 : HIGH QUALITY F3 : DRAFT F5 : SCREEN</p> <p>F7 : PRINT OPTIONS PS COLS = 23 * % WIDTH = 100% HIGH</p>	<p>[E]</p> <p>F1 : HIGH QUALITY F3 : DRAFT F5 : SCREEN</p> <p>F7 : PRINT OPTIONS PS COLS = 23 * % WIDTH = 100% HIGH</p>

Flowcharts and solid boxes

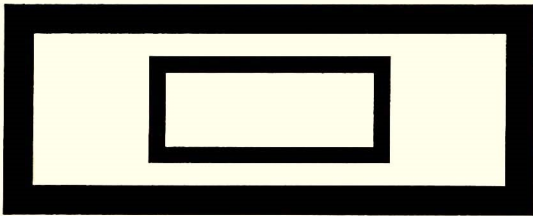
For flow charts you might need 4 extra line segments with arrowheads which we have put in [B] to [E]:



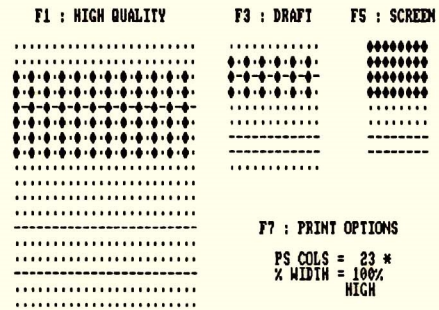
If you don't need the arrowheads try putting these 5 blocks in [B] to [F]:



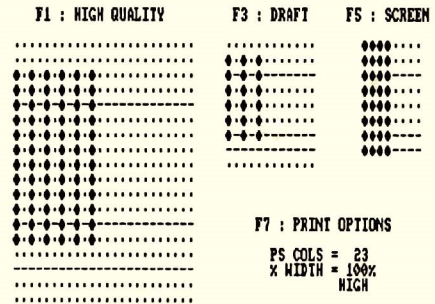
Use [B] to [E] for simple boxes with $\frac{1}{24}$ " thick outline: [B] is for the bottom line, [C] for the top, [D] for the left side and [E] for the right side. In this way the corners will butt together properly. [F] is a $\frac{1}{12}$ " square solid block, which can be used for solid black rectangles or $\frac{1}{12}$ " thick outlines with a full range of junctions.



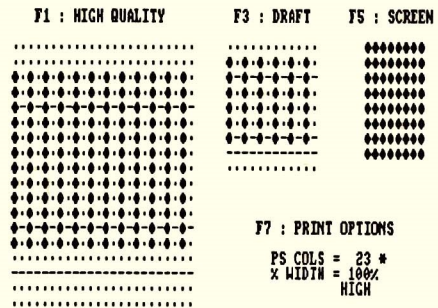
[B] ([C] = mirror image in the lower half of the pattern)



[D] ([E] = mirror image in the right half of the pattern)



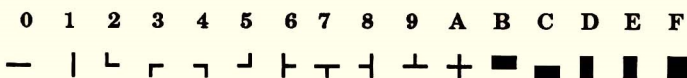
[F]



Further Hints & Tips

1. When defining any of these characters in LocoChar you should use the "F7: PRINT OPTIONS" to change the "% WIDTH" value to 100% (PS COLS = 23). Otherwise, if you ever use proportional spacing, the uneven widths will spoil things. Only do this when you have finished editing each pattern though, otherwise LocoChar will kindly change it back again! (Ignore the warning "*" if it appears; in this case you know better.)

2. Whether you use LocoChar for these line graphics or for special characters of your own, it is worthwhile putting the ones you will use most often in the range [0] to [9] because the keystroking for these (using EXTRA) is easier to remember. If you make frequent use of [A] to [F] as well consider saving the individual characters in phrases A-F. And if you still can't remember which is which, make a diagram like this:



and either print it out for reference or stick it in another phrase so that you can paste it in temporarily to refer to.

3. When printing line diagrams in draft mode you may find that the vertical lines are slightly jagged. This effect is due to the fact that the accuracy with which the characters are aligned in bi-directional printing (where alternate lines are printed in opposite directions) varies, depending on the printer. It will be more noticeable on some printers than others, but does not indicate a fault in the printer or the software. When printing in High Quality, the text is always printed from left to right especially to ensure that the characters are as straight as possible.

It is not possible to disable bi-directional printing explicitly, but there is a trick to "frighten" LocoScript so that it only prints left to right. To do this, define a dummy space in one of your LocoChar characters: set no blobs at all in the printer patterns and put just a single blob near the middle of the screen pattern (as it is helpful to see these dummy spaces while editing). Whenever you draw boxes etc. which will be draft printed, include somewhere in each halfspaced line the sequence (+Italic)dummy space(-Italic) instead of a normal space. LocoScript always prints lines containing Italics from left to right, so this empty character in Italics persuades it to do all the printing in the same direction, and your verticals will look that much better when printed. Remember, though, that the dummy space looks to LocoScript like a normal character and will act rather like a hard-space if you put it near where a line break should occur.

Updating Layouts

In the first two issues of *Script* we discussed using layouts and, in particular, Stock Layouts. Stock Layouts are a powerful feature of LocoScript 2 as they enable you to set up a variety of different layouts which are always available for use anywhere in a document. They enable you to be more organised about the way you use layouts, and if you set up Stock Layouts in a template, they are automatically available in all the documents created using that template.

In this article, we discuss how you can update the Layout codes in your document to match the current versions of the Stock Layouts that you have stored in the Document Set-up.

When you select a Stock Layout to use in your document, LocoScript 2 places a copy of that Stock Layout in your document. Unlike LocoScript 1, Layout codes in LocoScript 2 are independent of the Stock Layouts they were created from once they are placed in the document. So when you change the Stock Layouts in the Document Set-up, the copies of these layouts in the document are not affected by the changes you make.

Using the 'Change Layout' feature is one way of updating all the Layout codes in your document, but this is time consuming. It also means a duplication of effort if the same layout is used more than once. So LocoScript has two features to help you update your layouts easily and efficiently. These are Layout Replacement and Layout Exchange and they let you change layouts in your document to match your current set of Stock Layouts.

Layout Replacement and Layout Exchange perform very different functions, despite their similar names! Layout Replacement is used to replace copies of old Stock Layouts in your document with copies of the current versions. Layout Exchange allows you to exchange any layout in your document

for a copy of any Stock Layout or change it to something completely different using the standard menus of the Layout Editor.

Layout Replacement



Layout Replacement produces a result that is similar to LocoScript 1's automatic updating of layouts. Its function is to update old Stock Layouts used in your documents with copies of the current versions. All you have to do is to pick out the Stock Layouts you want updated in the document and LocoScript does the rest automatically.

You would use Layout Replacement when you have created a document using a set of Stock Layouts, but subsequently changed your mind about the way to lay out the text. For example, you may have created a long or complex document and

then decided that the appearance of the text requires fundamental changes, for example, different margins.

Before you use Layout Replacement, you need to decide which of the Stock Layouts you want to change. You can look at the details of each Stock Layout by going into Document Set-up and selecting the option to 'Change Stock Layouts'. Select a Stock Layout with the menu cursor and, if necessary, change it by using the Layout Editor menus. When you've finished looking at the Stock Layout, just press [EXIT] to return to the Stock Layout menu. Once you have completed all the changes, press [EXIT] and [ENTER] twice to return to editing the document: you are now ready to start replacing the layouts in your documents with copies of the new Stock Layouts.

Layout Replacement works through the document a bit like the Automatic version of Exchanging text. When LocoScript finds any layout with the same name as a Stock Layout you ticked, the layout is replaced with a copy of the corresponding Stock Layout. As LocoScript works down a document, you will see the text in this part being reformatted in line with the details in the copied layout.

(contd.)

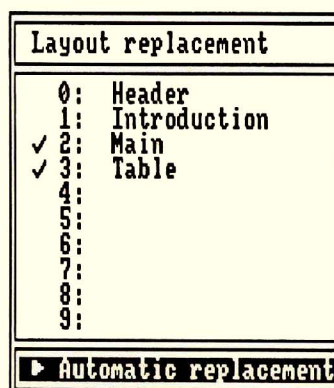
Naming Layouts

When you use Layout Replacement, LocoScript looks for Layout codes which have the same name as a Stock Layout that you have ticked.

As always, we recommend that you give each Stock Layout a meaningful name as this will help you to remember how you intended to use the layout.

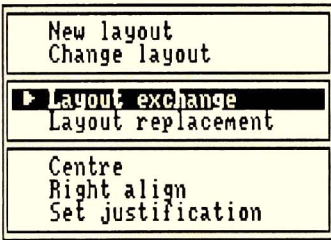
You can then use these names to help you to pick out the layouts you want to update as the layout names are displayed on all the Stock Layout menus.

The Layout Replacement Menu



To use Layout Replacement, position the Text cursor before the first Layout code you want to update. Select Layout Replacement from the f2 Layout menu and when the list of Stock Layouts appears, tick the Stock Layouts you want to replace and press [ENTER]. If you don't tick any, LocoScript will go to the end of the document without changing anything! You can tick as many Stock Layouts as you want and LocoScript will process them all as it works through the document.

Layout Exchange



Layout Exchange provides you with a way of updating your layouts manually. Unlike Layout Replacement, Layout Exchange stops and asks you what you want to do with each Layout code that it comes across.

The main use of Layout Exchange is to tidy up the Layout codes in your document and make them more consistent. For example, you may have initially introduced Layout codes in a haphazard way, using the 'New layout' option on the f2 Layout menu. But if you have found Stock Layouts a more efficient way of working, you may want to exchange all the layouts in your documents for copies of the Stock Layouts you have set up. You can use Layout Exchange to exchange each layout in turn for one of the Stock Layouts.

Using Layout Exchange to tidy up your documents in this way means that updating your layouts in future will be much easier. By exchanging the Layout codes in your document for copies of the Stock Layouts, you will be able to use

Layout Replacement's automatic updating for all your layouts. You may even have to use Layout Exchange before you can use Layout Replacement at all!

Just like Layout Replacement, Layout Exchange works through your document from the current cursor position, so start with the Text cursor before the first Layout code you want to change. Layout Exchange works a bit like the Manual version of Exchanging text. When it finds a Layout code, LocoScript then drops down a menu with four options (see below). This menu is displayed for each layout LocoScript finds until the end of the document is reached or you choose to abandon Layout Exchange.

Of course, if there aren't any Layout codes in the document, LocoScript will scroll to the end of your document without displaying the Layout Exchange menu.

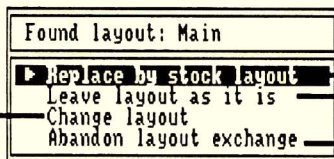
Layout Replacement and Layout Exchange let you update the layouts in your documents easily and efficiently. Layout Exchange is intended to help you set up your documents so that in future you can use Layout Replacement to update the Layout codes. By exchanging all your Layout codes for copies of Stock Layouts, you will find it easier to make changes to your layouts. All you will have to do is alter your set of Stock Layouts as required, and then use Layout Replacement to automatically update the Layout codes in your document.

Layout codes in LocoScript 1 and LocoScript 2

In LocoScript 1, each Layout code in a document merely referred to a part of the Document Header where the details of that layout were stored. So if you changed a layout, you actually changed the details of a Layout stored in the Document Header. This changed the layout in the part of the document you were interested in but it also changed all the other parts of the document that used this layout – which could be frustrating if you didn't want this to happen. It was also time-consuming waiting for LocoScript 1 to complete all this automatic updating throughout your text.

In LocoScript 2, each Layout code contains all of the details of the layout and is independent of the other Layout codes in the document and of the Stock Layouts. (This is one of the reasons why documents can increase in size when they are converted from LocoScript 1 to LocoScript 2.) So when you change a Layout code you are only changing that code – no other part of the document is affected and the operation is quicker. Another advantage of LocoScript 2 Layout codes is that you can now move text, with embedded Layout codes, into another document and the Layout codes will not change. The new way of handling Layout codes has also contributed to the increased speed with which you can scroll through a document in LocoScript 2.

The Layout Exchange Menu

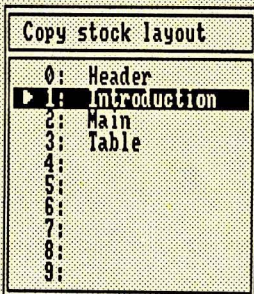


Change layout: This is the option to select when you want to change the layout but not simply to a copy of a Stock Layout. This takes you straight into the Layout Editor where you get the standard set of menus to help you change the layout. When you've finished setting this layout up, press [EXIT]: LocoScript then moves onto the next Layout code.

Leave layout as it is: This is the option to select when you have no need to change a particular layout. LocoScript leaves the Layout code unchanged and moves to the next Layout code in the document.

Abandon layout exchange: Select this option if you have reached the end of the section of text you want to change, or if you just want to stop when you've had enough! The cursor will be left at the position of the last Layout code it came across.

Replace by stock layout: Select this option when you want to replace a layout with a Stock Layout. LocoScript immediately displays the Copy Stock Layout menu. Simply select the one you want with the Menu cursor, press [ENTER] and the Layout code in the document will be replaced by a copy of that Stock Layout.



Sorting LocoMail Data Files

In previous issues of *Script* we have concentrated on the master document which is merged with a data file to give a set of personalised letters or labels. This month we look at the data file.

Our support department often gets asked if LocoMail can sort a data file such as an address list into alphabetical order. The answer is no, LocoMail can't – but Mallard BASIC can. Mallard BASIC is our BASIC interpreter which Amstrad supplies with the PCW.

This article looks at how you can use Mallard BASIC to sort your LocoMail data file. You won't need to know about BASIC to put this into practice, but we do assume you have got to grips with LocoMail.

A programming language like Mallard BASIC lets you use the PCW in the traditional way computers are used. You write commands and the PCW carries them out. Unfortunately, you can't just give the command "Sort my data file", you have to break down this complex command into a number of simple steps – a program.

Mallard BASIC is particularly suited to sorting files, since in addition to the features that most versions of BASIC have, Mallard is able to handle so-called keyed files. These files effectively have a built-in alphabetical index which Mallard keeps up to date for you. Consequently, it is very easy to use Mallard to sort information in a LocoMail data file by reading it into a keyed file and then reading back the information in alphabetical order before writing the sorted LocoMail data file back onto the disc.

However, you can't just use Mallard BASIC by putting in a disc and resetting the PCW, as you do to use LocoScript. Instead, you first need to load CP/M, then you can run Mallard BASIC.

We'll describe how to use Mallard BASIC to sort your file shortly, but first a note about LocoMail data files. LocoMail data files are typically LocoScript documents. Unfortunately, Mallard BASIC cannot work with LocoScript files: like most CP/M programs, Mallard uses ASCII (American Standard Code for Information Interchange). ASCII is a way of representing textual information in a standard (if rather limited) way. LocoScript 2 documents do not use ASCII, they use a much more complex system to represent the characters so that all the formatting information can also be

remembered. So before you can use Mallard to sort your LocoMail data file, you have to convert it to ASCII.

The way to convert your LocoScript data files to ASCII is to use LocoScript's "Make ASCII" file feature. Then you'll be able to use your data file with Mallard BASIC. The sorted file the program produces will also be ASCII and you may think this means that you have to convert it back to LocoScript before you can use it again with LocoMail. However, LocoMail does not need the full power of LocoScript documents to represent the data; in fact, it also accepts ASCII files for the data files. So you can use the sorted file straight away.

Decoding the data file

The structure of a LocoMail data file is first a record pattern, then a sequence of data records. Each of these is governed by a strict set of rules:

- The record pattern consists of patterns for each data item, possibly starting with or separated by spaces or tabs, and finishing with a record terminator – a special character.
- Each data item in the record pattern consists of a "name" made up of letters and numbers, possibly spaces or tabs and then a separator – which can be one of a set of special characters.
- The data records consist of data items, each of which is terminated by the separators defined in the pattern.

Working through the records bearing in mind these rules allows us to read and understand the data. Converting this into Mallard BASIC commands is the secret of breaking down the operation of sorting the data file into a program.

For example, a typical record pattern might be:

```
First_name ←  
Last_name ←  
Street ←  
Town ←  
County ←  
Postcode ↓
```

This requires the following data records to consist of each subject's first name, a carriage return, their last name, a carriage return, the first line of the address, a carriage return etc until the fourth line of the address where the end of the record pattern is marked by an End-of-page character. What our sort program has to do is to read this pattern so that it can ask whether to sort on First_name or Last_name etc. Then it reads each record into a keyed file, remembering the item separators, and so sorts the data.

There are a number of programs which can do this task and on page 11 we give an example of such a program for you to use. This will sort a LocoMail data file which has been saved in ASCII. You will need to type in the program following the instructions we give later, and then use it to sort your data files. You'll be able to use the sorted data file with LocoMail, but you won't be able to use LocoScript 2 to edit it after sorting unless you use the "Insert Text" feature to convert it back to a LocoScript 2 document.

To keep the program simple, you will have to supply the maximum number of characters in any of your data records and the number of data items in each record.

It would take too much space to describe the whole program in detail here, but for those who are interested, an outline of how it works now follows.

The program starts with a section (lines 1000–1320) which sets up all the information that Mallard requires. This asks for details of the data records, makes sure that enough memory is set aside to hold all the information and creates the keyed file on disc which will be used to sort the data.

The next section (lines 1330–1590) reads the record pattern of the LocoMail data file looking for the various names of the data items and the item separators. It stops when it finds the \downarrow signifying the end of the record. It is also prepared to understand the \leftarrow form of record separator using a special subroutine which starts at line 2500. However, it cannot understand (UniT) terminators because these, like other LocoScript codes, were removed when you converted the data file into an ASCII file. This section relies on the rules for the pattern to extract the various item names and separators and they are used later to decode the items in the data records. The names are also used in the next section (lines 1600–1710) where the user is asked which of the data items are to be used to sort by.

The next 25 or so lines are obeyed repeatedly, once for each set of real data in the file. First a record is read (and its items are decoded). Then a “key” is constructed from the items to be sorted. Then the record is saved in the keyed file, marked with this key. These simple steps essentially sort the data file!

The lines 2010–2320 read back the records in sorted order and write the sorted data file to disc. Of course, this section also adds the record pattern at the very beginning of the data – otherwise LocoMail wouldn’t understand it!

The lines 2330–2770 look at the characters in order to find the start of the next record and recognise when the end of the file has been reached. They also deal with such special cases as two consecutive carriage returns and line feeds.

In case you don’t want to type in the program, we are making a version of it available on a 3" disc for £9.95. If you wish to order this special disc, which also contains the latest version of BASIC, just complete the enclosed order form and indicate in the Other Products box that you want the ‘LOCOMAIL SORT DISC’.

If you wish to find out more about Mallard BASIC itself, then you can purchase the Mallard BASIC User Guide using the same order form.

This 464 page manual consists of Introduction and Reference sections and costs £9.95.

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Mixing CP/M and LocoScript Discs

CP/M and LocoScript organise their discs in the same way but use them differently. CP/M splits its files into 16 User groups. LocoScript also splits its files into 16 groups, but you can only use 8 of them (corresponding to the CP/M User groups 0 to 7). LocoScript uses the remaining 8 groups to hold the Limbo files. These Limbo files are only deleted when LocoScript needs space for a new file.

The problem is that a LocoScript disc might appear to be half empty, when the other half is full of Limbo files. Such a disc looks almost full to CP/M as it thinks the Limbo files are real files. In addition, if you save files in CP/M in User groups 8 to 15, LocoScript might delete these files because it thinks they are Limbo files.

We advise you not to mix LocoScript discs with CP/M. Instead, reserve some discs for use with CP/M and only use LocoScript to read the files on them or to save new ASCII files on them.

Typing in the Sort program

Note: We suggest that you use a newly formatted disc as your ‘Sortmail’ disc – ie. to store the Sort program and the ASCII versions of your data files. If necessary, prepare this first using LocoScript’s Format disc option (see p. 76 of the User Guide).

- 1) Load CP/M from your CP/M master disc (Side 2 on 8256/8512, Disc 2 on 9512)
- 2) Load Mallard BASIC by typing BASIC $\boxed{\text{RETURN}}$
You will see Mallard’s copyright message followed by the prompt OK.
- 3) Replace the CP/M master disc by your Sortmail disc.
- 4) Type AUTO 1000 $\boxed{\text{RETURN}}$
so that Mallard will prompt you with the line numbers of the program.
- 5) Type the program lines following the line numbers **exactly** as shown, terminating each by pressing $\boxed{\text{RETURN}}$. Otherwise the program will not work correctly.
Be careful to distinguish between 1 (one) and I (letter) and between 0 (zero) and O (letter). Also look out for the lower case l (ell) which resembles both 1 and I. If you make a mistake, use $\boxed{\leftarrow}$ and $\boxed{\rightarrow}$ to move around the line and $\boxed{\text{DEL}\rightarrow}$ and $\boxed{\leftarrow\text{DEL}}$ to remove incorrect characters. You can only correct the line you’re working on – if you notice a mistake in a previous line, wait until you’ve finished typing the program then re-type the whole of the incorrect line including the line number.
- 6) When all the lines have been typed, press $\boxed{\text{STOP}}$. BASIC will display the OK prompt.
It is now time to retype any incorrect lines.
- 7) Type SAVE "SORTMAIL" $\boxed{\text{RETURN}}$ to save the program on disc as SORTMAIL.BAS.

Sorting a data file

- 1) If the data file is a LocoScript document, use LocoScript’s Make ASCII file option to create an ASCII version of the file and store this in group 0 on your Sortmail disc (see p. 153 of the User Guide). If the data file is already ASCII, simply copy it to your Sortmail disc (eg. using LocoScript’s Copy file option).
- 2) Load CP/M from your CP/M master disc (Side 2 on 8256/8512, Disc 2 on 9512)
- 3) Load Mallard BASIC by typing BASIC $\boxed{\text{RETURN}}$
- 4) Replace the CP/M master disc by your Sortmail disc.
- 5) Type RUN "SORTMAIL" $\boxed{\text{RETURN}}$

The program will prompt you for the name of the data file, the maximum record size and the maximum number of fields in each record ie. the number of data items specified in the record pattern, and finally the number of the data item you want the file sorted on. If you type any of this incorrectly, the program will give you an error message (see page 12). Simply restart the program by typing RUN $\boxed{\text{RETURN}}$ and type in the details again.

Important: The maximum record size you give should be the number of characters in your largest record – plus a few because Sortmail needs extra space for carriage returns and end-of-record markers. However, the size doesn’t need to be precise – so we suggest rounding it up to 100 or 200.

When the program has finished, your data file will be sorted in the order you specified and ready for use with LocoMail.

The Sortmail Program

```
1000 REM SORTMAIL.BAS : sorts ASCII LocoMail data files
1010 REM written by Locomotive Software Ltd : January 1988
1020 REM featured in "Script" Issue 2 : Jan 1988
1030 '
1040 disp = -1 'set disp=0 to avoid displaying records
1050 '
1060 IF FIND$("SORTFILE.$$D") <> "" THEN KILL "SORTFILE.$$D"
1070 IF FIND$("SORTFILE.$$I") <> "" THEN KILL "SORTFILE.$$I"
1080 IF FIND$("SORTFILE.BAK") <> "" THEN KILL "SORTFILE.BAK"
1090 '
1100 tab$=CHR$( 9) 'tab
1110 ff$ =CHR$(12) 'formfeed (end of page)
1120 eof$=CHR$(26) 'end of file
1130 cr$ =CHR$(13) '(carriage) return
1140 lf$ =CHR$(10) 'line feed
1150 crlf$=cr$+lf$
1160 '
1170 infile =1
1180 keyfile=2
1190 outfile=3
1200 '
1210 INPUT "File to be sorted: "; filename$
1220 INPUT "Maximum record size: "; recsize
1230 INPUT "Maximum number of fields: "; maxfields
1240 '
1250 BUFFERS 10
1260 MEMORY ,,MAX(recsize,128)
1270 '
1280 OPEN "I", #infile, filename$
1290 pb$=""
1300 CREATE #keyfile,"SORTFILE.$$D","SORTFILE.$$I",2,recsize
1310 DIM name$(maxfields), sep$(maxfields)
1320 '
1330 PRINT
1340 PRINT "Reading the pattern"
1350 PRINT "_____ "
1360 PRINT
1370 GOSUB 2340 'find start of the pattern
1380 crcr = -1 'amalgamate CRs
1390 namechar$="ABCDEFGHIJKLMNPOQRSTUVWXYZ_012345789"
1400 ' Continentals should add their accented characters!
1410 fld=0
1420 WHILE (c$<>ff$) AND (c$<>eof$)
1430 fld=fld+1
1440 fldname$=""
1450 WHILE INSTR(namechar$,UPPER$(c$)) <> 0
1460 IF LEN(fldname$)<16 THEN fldname$=fldname$+c$
1470 GOSUB 2590 'read a character
1480 WEND
1490 name$(fld)=fldname$
1500 GOSUB 2440 'skip spaces
1510 sep$(fld)=c$
1520 GOSUB 2590 'move past separator
1530 GOSUB 2440 'skip spaces
1540 IF c$="/" THEN GOSUB 2500 'check for / terminator
1550 WEND
1560 '
1570 PRINT #keyfile,eof$;'mark end of pattern
1580 rc=ADDREC(#keyfile, 0, 1, "Pattern")
1590 IF rc>0 THEN PRINT "Pattern add failure: "; rc
```

```
1600 PRINT
1610 PRINT "Field names:"
1620 PRINT "_____ "
1630 PRINT
1640 FOR f = 1 TO fld
1650 PRINT USING "### &"; f; name$(f);
1660 IF (f MOD 3)=0 THEN PRINT ELSE PRINT TAB((f MOD 3)*28);
1670 NEXT
1680 PRINT
1690 PRINT
1700 INPUT "Type field number to order by: "; keyfield
1710 IF keyfield<1 OR keyfield>fld THEN GOTO 1640
1720 PRINT
1730 PRINT "Reading records to sort"
1740 PRINT "_____ "
1750 recs = 0
1760 WHILE NOT EOF(infile)
1770 recs = recs + 1
1780 GOSUB 2340 'find start of record
1790 IF disp THEN PRINT:PRINT "Record "; recs
1800 FOR f = 1 TO fld
1810 crcr = (sep$(f)=crlf$+crlf$)
1820 item$=""
1830 IF disp THEN PRINT name$(f); " = ";
1840 WHILE (c$<>ff$) AND (c$<>sep$(f)) AND (c$<>eof$)
1850 IF disp THEN PRINT c$;
1860 IF LEN(item$)<31 THEN item$=item$+c$
1870 GOSUB 2590 'read character
1880 WEND
1890 IF disp THEN PRINT
1900 IF f=keyfield THEN key$=item$
1910 IF f=fld THEN 1950 'stop at last separator
1920 crcr = (sep$(f+1)=crlf$+crlf$)
1930 GOSUB 2590 'read past separator
1940 GOSUB 2440 'skip spaces
1950 NEXT
1960 PRINT #keyfile,eof$;'mark end
1970 rc=ADDREC(#keyfile,0,2,key$)
1980 IF rc>0 THEN PRINT "Data add failure: ";rc
1990 WEND
2000 CLOSE #infile
2010 PRINT
2020 PRINT "Writing records in sorted order"
2030 PRINT "_____ "
2040 PRINT
2050 NAME filename$ AS "SORTFILE.BAK"
2060 OPEN "O", #outfile, filename$
2070 '
2080 rc=SEEKCRANK(#keyfile,0,1) 'first record in sorted file
2090 PRINT "Pattern"
2100 recs = -1
2110 WHILE rc=0 OR rc=101 OR rc=102
2120 recs = recs + 1
2130 IF disp THEN IF recs>0 THEN PRINT:PRINT "Record "; recs
2140 GET #keyfile
2150 c$=INPUT$(1,#keyfile)
2160 WHILE c$<>eof$
2170 PRINT #outfile, c$;
2180 IF disp THEN PRINT c$;
2190 c$=INPUT$(1,#keyfile)
2200 WEND
2210 IF disp THEN PRINT
2220 rc=SEEKNEXT(#keyfile, 0)
2230 WEND
```

(contd)


```

2240 IF rc<>103 THEN PRINT "Seeking failure:".rc
2250 '
2260 CLOSE #outfile, #keyfile
2270 KILL "SORTFILE.$$D"
2280 KILL "SORTFILE.$$I"
2290 PRINT
2300 PRINT UPPER$(filename$); " now sorted"
2310 PRINT "Original version is saved as SORTFILE.BAK"
2320 END
2330 '
2340 ' subroutine to find start of record
2350 ' _____
2360 '
2370 c$=" " 'we have not seen FF
2380 crcr = 0 'do not amalgamate CRs
2390 GOSUB 2590 'skip a character
2400 GOSUB 2440 'skip spaces
2410 IF c$=crlf$ THEN GOTO 2390 'skip CRs
2420 RETURN
2430 '
2440 ' subroutine to skip spaces and tabs
2450 ' _____
2460 '
2470 IF (c$=" ") OR (c$=tab$) THEN GOSUB 2590:GOTO 2470
2480 RETURN
2490 '
2500 ' subroutine to spot special pattern terminator /CR
2510 ' _____
2520 '
2530 GOSUB 2710 'fetch next character
2540 IF c$<>crlf$ THEN pb$=c$ : c$="/" : RETURN
2550 PRINT #keyfile,c$;
2560 c$=ff$
2570 RETURN
2580 '
2590 ' subroutine to read character (or last put back)
2600 ' _____
2610 '
2620 IF c$=ff$ OR c$=eof$ THEN RETURN 'FF/EOF ends all items
2630 IF pb$<>" THEN c$=pb$:pb$="":GOTO 2680
2640 GOSUB 2710
2650 IF c$<>crlf$ OR crcr=0 THEN GOTO 2680
2660 GOSUB 2710
2670 IF c$=crlf$ THEN c$=crlf$+crlf$ ELSE pb$=c$:c$=crlf$
2680 PRINT #keyfile, c$;
2690 RETURN
2700 '
2710 ' subroutine for raw character read
2720 ' _____
2730 '
2740 IF EOF(infile) THEN c$=eof$ ELSE c$=INPUT$(1,infile)
2750 IF c$=lf$ THEN 2740 'ignore line feed
2760 IF c$=cr$ THEN c$=crlf$ 'but convert CR to CR+line feed
2770 RETURN

```

Error messages

Filename not found in nnnn

– you have typed in the name of the file incorrectly.

Record overflow in nnnn

– the number you gave for the maximum record size was too low

Subscript out of range in nnnn

– you have more fields than this in your record pattern

Running the program

CP/M Plus Anstrad plc

v 2.0H, 54K TPA, 1 disc drive, SID/Centronics add-on, 112K drive M:

A)basic

Mallard-80 BASIC with Jetsam Version 1.23
(c) Copyright 1984, Locomotive Software Ltd
All rights reserved

24429 free bytes

Ok

run "sortmail"

File to be sorted: ? address.lst

Maximum record size: ? 100

Maximum number of fields: ? 6

Reading the pattern

Field names:

1	2	3
First_name	Last_name	Street
4	5	6
Town	County	Postcode

Type field number to order by: ? 2

Reading records to sort

Record 1
First_name = Bill
Last_name = Shakespeare
Street = 2 Drury Lane
Town = Exeter
County = Devon
Postcode = EX2 6YT

Record 2
First_name = Jane
Last_name = Austen
Street = 33 Northanger Road
Town = Sutton
County = Surrey
Postcode = SM6 4RB

Record 3
First_name = Samuel
Last_name = Pepys
Street = 15 Pudding Lane
Town = London
County =
Postcode = SW1 4HJ

... etc.

Writing records in sorted order

Pattern
First_name
Last_name
Street
Town
County
Postcode

Record 1
Jane
Austen
33 Northanger Road
Sutton
Surrey
SM6 4RB

...etc.

ADDRESS.LST now sorted
Original version is saved as SORTFILE.BAK

Ok

■

Letters

The printing of this letter is evidence of the ease with which a Silver Reed EXP 420 Printer has been successfully installed for LocoScript 2 documents on a PCW 8512. However, one problem remains unsolved: setting the printer up for bi-directional printing. Would you please confirm whether bi-directional printing is indeed possible with LocoScript 2 and the EXP 420.

Mrs AP, Stroud

We have received quite a few letters from people pointing out that their daisy-wheel printers are not printing bi-directionally and asking if this is LocoScript's fault.

LocoScript 2 uses the technique of micro-justification to achieve perfect justification of text. This involves measuring space size in units of $\frac{1}{120}$ th of an inch. To achieve this, LocoScript sends precise character positioning commands to the printer. Unfortunately some printers are unable to cope with these commands and at the same time print bi-directionally.

Only certain types of printer are affected. For example, Diablo 630 compatible printers tend to be affected while Qume compatible printers tend not.

When you use LocoScript's disc-copying facility, after the computer has read the first third of the original disc and asks you to put in the new disc to write on, there is no safeguard to make sure that you do not inadvertently erase the original disc, if you forget to replace it with a new disc – the computer cannot recognise whether a new disc has been inserted – it will quite happily start writing on the original disc – which is what happened to me when I by mistake pressed the 'enter' key before the new disc was inserted – and lost the material recorded on the original disc.

Mr JC, Glasgow

*The reason you have lost the data on your original disc is because you have not write-protected the disc you want to copy before starting the copying process. When copying information from one disc to another, you should always 'write protect' your source disc by making sure that the hole in the top left hand corner of each side of the disc is open. If either hole is closed, just move the shutter to open it. This will prevent you from accidentally overwriting your source disc if you press **ENTER** before removing it from the drive.*

I am having difficulty in setting up my wide carriage printer for paper 14 inches wide. As the manual points out at p. 209, as soon as I select Continuous Paper, the Paper Type Menu takes away the opportunity of setting paper width, because "Continuous paper can only be used one way round so its width is irrelevant" (p.210). Not so: its width varies, and if I attempt to use paper 14 inches wide the printer behaves as if it is only 9 inches wide. How can I tell LocoScript 2 that I am using wide continuous stationery?

Mr JC, East Twickenham

The Paper Type controls the length of the paper you want to use, not its width. When setting up a new paper type you are given the option to enter its width only because you may want to use the paper 'landscape' (ie. widthways). The width setting, in effect, tells LocoScript how long the paper is when it is turned on its side. As continuous paper cannot be used landscape, the option for setting the paper width is removed.

*The width that you want to use is part of the information that LocoScript needs to control the printer, in particular to prevent the printhead hitting the righthand edge. You set this through the Printer Options in the **F6** Settings menu. (This feature is available on version 2.12 or later.) You also have to ensure that the margins in your layouts fit in with the width you have set on your printer.*

I am confused about the paper I use in my printer. I use 11 inch continuous most of the time, and would like to make this the 'norm'. Whilst I can get this right as far as my document is concerned I can't seem to get the printer to do likewise. I always get the menu up asking me if I wish to use the paper intended for the document. Is there any way I can overcome this?

Major AL, Aldershot

When LocoScript is loaded, it sets up the printer for a particular paper type – usually A4 single sheet stationery. Your document is set up for a different paper type – 11" continuous so you get the message asking you to 'Change to paper intended for document'. If you select this option, LocoScript sets up the printer for this paper type and you shouldn't see this message until you load LocoScript again.

I have just copied a disc in drive B and was surprised to find it being done in 5 parts; every time I have previously copied discs in the same way with this program I'm certain it has been done in 3 parts. In each case the copies were made using the system described in Session 7 in the User Guide. Does the program make an arbitrary choice as to how it copies discs in Drive B or is there a fault in the program? I have not discovered any other aberrations in the program and am very pleased with it.

Brigadier RH, Winchester

The number of parts involved in the copying process is not chosen arbitrarily by LocoScript – it depends on the amount of free space you have in Drive M. When you copy a Double-track disc on a PCW8512 or a Single-track disc on a PCW8256, LocoScript 2 copies the contents of the disc onto Drive M so that you can remove the disc being copied and insert the disc to be written. Because there is not enough room in Drive M to hold the contents of the entire disc, this copying process is divided into several parts. (We do use some other spare memory as well, but most of the copying is done using Drive M.) The number of parts will vary depending on the amount of space available in Drive M. For example, if you use LocoSpell and have the large dictionary in Drive M, you will have less room in memory and therefore the number of parts necessary to complete the copying process will increase.

*You can change the paper type that LocoScript sets up the printer for by updating the Printer Defaults in your Settings file. LocoScript 2 gets the information displayed in the Printer Control State from the Settings file on your Start-of-day disc when you start up. So to make '11continuous' the 'norm' for your printer, press **F6** from the Disc Manager Screen to display the Settings menu, select the option for Printer Defaults and press **ENTER**. Check at the top of the menu that you will be setting the defaults for the right printer, then select 'Default Paper Type', press **ENTER** and tick '11continuous'. Then press **EXIT** and **ENTER** until you have returned to the first menu. Press **EXIT** and accept the option to write the Settings file back to your Start-of-day disc. When you load LocoScript in future, your printer will automatically be set up for this Paper Type.*

Letters

Why not put the cursor on the Print menu at the first line where it can do anything useful – ie at High quality. If the filename is accidentally edited – eg by the space bar – this must be corrected or there's trouble.

Mr TT, Hull

We feel it is important that menus performing similar functions should be consistent in appearance: because then it is clearer how each menu should be used. All menus which deal with document or file names have the chosen Name/Group/Drive at the top and commands at the bottom. The cursor is positioned over the filename so that if you have accidentally chosen the wrong file, you can type in the name of the one you intended to select. The commands are placed at the bottom so that setting other details in the menu won't accidentally change the command that's selected.

*You should note that pressing **[TAB]** will move the cursor directly to the first command option (Print all of document) and a further **[TAB]** will move down to the second command (Print part of document). This works in all menus containing command options (selected with an arrow or a diamond).*

The LocoScript manual describes the steps necessary to set up or edit a paper type. One of these steps is the specification of a printer left offset for the paper type, implying that a "left offset" field should appear in the paper type menu between the height and width and the gap fields. As this facility does not appear to be present, there is no way of associating a left offset with a paper type. I would be grateful if you can tell me if this is in fact the case, as the only remedy appears to be either contortion of the ruler margins, or manually setting the left offset when using the printer.

Dr AW, London

You haven't seen the Left Offset option in this menu because you've been working with single sheet stationery and the Left Offset only appears in the Paper Type menu for continuous types of stationery. It doesn't appear in the menu for

Today we received LocoScript 2. I used it right away to take advantage of its improved character shapes for a form that is intended for offset printing. So I converted the document from LocoScript 1 to LocoScript 2 and printed it out. The improvement in the character shapes was obvious. I was very disappointed, however to see that some of the underscores were uneven. Those made with (+UL) (+RAlign)_____(-UL) look fine while those made with (+UL)_____(-UL) are heavy and unsightly. The mixture of the two on one and the same page is unacceptable. This is a new problem that did not exist with LocoScript 1.

Mrs WB, Germany

*Your problem arises because you are combining two different types of underlining. Firstly there is the " " character which you type as **[SHIFT]**_. Secondly there is automatic underlining which you turn on and off with (+UL), (-UL) codes. Using both types of underlining together was fine in LocoScript 1 because the lines produced by the underline character and auto-underlining were positioned on top of each other. However in LocoScript 2*

single sheet paper types because, whereas the location of continuous stationery is fixed by the position of the tractor feeds, the position of single sheet stationery is nothing like as fixed and so a fixed Left Offset is not very useful. On continuous stationery, for example labels, the Left Offset can ensure that you always print on the label – not on the backing paper.

*You can set the Left Offset for your continuous stationery by selecting 'Paper Types' in the **[76]** Settings menu. Position the Menu cursor over the continuous paper type you use, press **[ENTER]** and a menu will be displayed with the details of the paper type. Set the Left Offset and then with the cursor over 'Set new details', press **[ENTER]**. When you leave the Settings menu, remember to accept the option to write the new Settings file on your Start-of-day disc – otherwise the Left Offset will revert to its old setting.*

we have lowered the line produced by auto underlining slightly. This was done to improve the appearance of underlined text by increasing the amount of space between the line and any letters sitting on it. The position of the underline character, however, is unchanged. This explains why you now print a double image of a solid line slightly below a broken line of underline characters.

The underline character is not intended to be used for underscoring and we advise you not to use it for this purpose. Instead type a (+UL) code followed by as many spaces you require for the length of the line, and then put in a (-UL) code.

I find the phrases section very useful for my own everyday phrases, but every so often my phrases disappear and the original phrases reappear although I have deleted the whole set. As you can appreciate this is very annoying as I have to go through the whole procedure of deleting the original phrases and inserting my own again. Other users in the office have also found this happening after a time. Can you explain why this should happen and perhaps solve the "Mystery of the disappearing phrases?"

Miss SR, London

It is difficult to deduce what is happening to your phrases, but we would guess that after changing them, you have forgotten to save them back on your Start-of-day disc.

When you load LocoScript, the phrases file PHRASES.STD on your Start-of-day disc is automatically loaded and becomes the set of phrases currently available for use in your documents.

If you set up new phrases, you must save them back in PHRASES.STD on your Start-of-day disc to make the changes permanent. If you forget to do this, you will lose them when you switch off the machine.

*Alternatively, you can save a set of phrases as a file on a data disc – called PHRASES.STD if you like. But you must remember that only PHRASES.STD in group 0 on your Start-of-day disc will be automatically loaded when you start up. To use any other phrases file, you must load it separately using the **[F5]** Actions menu on the Disc Manager screen.*

Letters

On changing the layout it appears to have been changed, but then reverts to the previous layout when I return to the document. This happened several times and is rather frustrating. Where can I have gone wrong?

Mr EK, Walton-on-Thames

From your description of this problem, it sounds as though you are changing the layout by using the f2 Layout menu on the Pagination Screen.

The Change Layout option here changes Stock Layout 0 reserved for your header and footer text. Your changes will have no effect on the layout of your document unless you pull a copy of the new Stock Layout 0 into your document.

To change a layout in your document, move the cursor to a position after the Layout code, or anywhere in the document if you only use one main layout throughout.

Then press [F2] for the Layout menu and select the option to 'Change layout'. Once you have made the required changes, press [EXIT] to return to your document, and you'll see LocoScript relaying the text up to your current cursor position.

Thank you for your extremely helpful letter of 4th November. As a result of this I have been able to get LOCOCHAR working – what a marvellous device! – and can successfully transfer the MATRIX.#xx files in working order to LocoScript working discs. There is, however one very minor problem – it is relatively easy to get the name of a character set on the SETTINGS file, but there seems to be no way of deleting it. Any ideas?

I would like to thank you once more for the careful help you have given me. I must also thank the LOCOCHAR team for doing such a good job.

Mr JC, Bristol

To delete a setting in the Settings file you must first delete the file containing your character set from Drive M and from your Start-of-day disc. This will not erase the name from the Settings file but it now appears in the Settings file with a

At the moment sixteen specific characters can be redesigned, but some of them are ones which I would like to keep but there are others which I really do not want.

The ability to choose any sixteen characters to change would be useful. I suppose no matter how many characters could be redesigned I would not think it enough.

My congratulations to you for producing LocoScript 2, which is remarkable value for money. I recently saw a word-processor for another type of machine which claimed to cope with mathematics and multilingual work, but on closer questioning it turned out that it was not all on one disc, so you could not put mathematics and cyrillic in the same document. Furthermore, the cheapest version was about ten times the price of your product. I was most unimpressed.

Dr EL, Southampton

For space reasons we have to limit the number of characters you can redesign. LocoScript supports such a wide range of characters that they are held in a compressed form, purely to keep the size of the character data down. However, a character has to be held in its full, expanded form for you to be able to modify it – so we compromised and decided to keep 16 of the characters in their expanded form. (Originally we

question mark by it to show that the file does not exist in memory. You must also ensure that the printer is not set up for this Character Set. To do this, press [PTR] to go into the Printer Control State and press the [F5] Printing menu. Select the 'Character Set' option and make sure that the Character Set you want to delete is not ticked.

You should then select the [F6] Settings menu from the Disc Manager Screen and look at the Character Sets available. If you then highlight the Character Set you want to delete with the cursor and press the [CUT] key, the name will be removed. You should then accept the option to write the updated Settings file back on to your Start-of-day disc.

You can use a similar procedure to remove Printer Driver Files (.PRI files) that you no longer require, though you must also ensure that the printer is not the 'current' printer.

thought we could only offer ten.) Unfortunately, this also meant we couldn't offer you a choice of the 16 characters to change.

We let you modify these particular 16 characters because we thought that their loss as a result of re-definition would cause the least inconvenience. Allowing you to redefine the letters A to P, for example, would not have been very helpful!

I was disappointed to find that you had not included several symbols widely used in chemistry, despite the huge number of special characters that are provided. I was not surprised, however, since I have failed to find a manufacturer of daisywheels who includes them either!

With the advent of LocoScript 2's user definable characters, I am now delighted to be able to produce these characters easily in the full range of styles and sizes.

One problem which foxed me for a while is that updating an existing MATRIX.PRI file and making the revised character set the default set has no effect on an existing document – the document has to be pasted into a new document in order to incorporate any changes.

Mr AT, Bromley

Revising a character set doesn't have an immediate effect on a document because of the way LocoScript records character information in the Document Set-up of each document. It does this so that you can edit a document that's been set up to use details in a particular Character Set file without having to have that file available.

So if you change the Character Set, you have to tell LocoScript to apply the changes to your document. It's not necessary to copy your text into a new document to do this. Instead, go into the Document Set-up of the document and press [F6]. When the Printing menu is displayed, check that the Character Set you want is selected, then move the Menu cursor down to 'Exit' and press [ENTER]. LocoScript will then update the Character Set in the document, and, provided you don't abandon the edit, you'll see the effect of the new Character Set when you print it out.

PostScript

LocoScript 2 may not have been stranded in the Gulf in July but it is being distributed worldwide. Locomotive Systems' 'export zones' include countries as far apart as Japan and Honolulu, Iceland and the Falkland Islands.

One customer in New Zealand asked if we could set up an outlet in Australia or New Zealand so that customers in these countries could upgrade their discs more easily! Unfortunately, the size of Locomotive (20 people) rules out such an undertaking, but we hope our overseas customers feel that we are catering adequately for them.

In countries where there is high demand for the product, we distribute LocoScript 2 through particular suppliers. Mitsubishi sell LocoScript 2 to the Australians and Datamension look after our American customers (see the News page). Other countries where we have an arrangement include France (Loisitech SARL), Denmark (Dina Micro), Bahrain (Transworld Trading) and the Netherlands where Schneider Computerblad supply the software.

We asked some of our British customers what they thought of LocoScript on the Amstrad machines and some of them described it as a superior typewriter! Johnny Speight, who writes the scripts for the BBC program "In Sickness and in Health" sees it as a sort of "typewriter that is smarter than the rest of them". He says it has revolutionised his life and taken the chore out of writing. The BBC are impressed by the neat presentation of his scripts, as well. We also received a letter from one customer who said he thought that LocoScript 2 was

'an improvement on the manual typewriter' but was disappointed that it wasn't as simple to use. We like to think it is a considerable improvement on a manual typewriter! Considering all the facilities LocoScript provides, it is not really surprising that LocoScript is not as simple to use as a typewriter. In fact, we would be pleased if you said it was.

It appears that we have been inundating some of you with copies of Issue 0 of *Script*, the complimentary issue that we produced. We decided to send it to everyone who bought LocoScript 2 or one of our other associated products – LocoSpell, LocoMail, Printer Drivers discs etc. Some of you have bought quite a number of these products and so have been receiving more than your fair share of *Script* 0s. In fact, one customer rang up and begged us not to send him any more – he had already received 5! This is possibly the record but if anyone has collected more, write in and let us know. We'll give a free upgrade to the latest version of LocoScript to anyone who has received more than 5 copies.

Whilst we're on the subject of LocoScript versions, you may be interested to hear that we have reached version 2.14 (version 2.13 went to the Danes and Canadians). Some people are concerned at the number of versions that are released and want to know if they will be missing useful facilities by not upgrading to each version. Well, new versions don't always mean new facilities – they often just mean improvements to existing features. When we do release a version with new features (like 2.12), you can rest assured that we will tell you about them.

In future issues:

We plan to follow up this month's article on LocoChar with a look at some of the designs you have been producing, and as some of you have expressed the wish to reproduce the standard LocoScript characters, we shall be publishing the grid patterns of some of these characters as well.

We shall also be looking at Scale pitch and Phrases, to help to resolve some of the difficulties that you have been experiencing in these areas.