

NEWSLETTER

Issue 12 - April 1998

MicroDesign & RoutePlanner Special

AMSTRAD

PcW9256

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CONTENTS

Welcome	3
Calendar Comp.	4
Diary Dates	5
Hardware News	7
RoutePlanner Review	7
Software News	15
Club News	15
Items for Sale/Wanted	15
MicroDesign Tutorial Part 2	16
MicroDesign Tutorial Part 3	25

**Congratulations
to Gwen Hoskins,
the winner of the
Christmas Calendar
competition.
Gwen wins a copy
of the RoutePlanner
software reviewed
in this issue.**

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WELCOME!

Adrian's Ramblings

Here I am, back again with my Ramblings. I now have a confession to make; although I had promised not to produce the Newsletter using my new PC this issue has been produced in precisely that way - but using only techniques available on the PcW and MicroDesign. This is mainly due to a complete lack of time (a standard complaint with me I'm afraid). During the last 10 days I have had to write over 70 letters for various purposes, and have also produced about 40 posters - I have had one or other of the computers on at almost all times. So the PC was chosen because it allows the typesetting and editing to be done in one go, and the printing only takes a tenth of the time that it would from the PcW (the printing of the Newsletter alone can sometimes take four hours). In some of the article you will find paragraphs telling you of the journey they had travelled along to get to where they are, to the ends of these should be added "then transferred back to ASCII format, copied onto the PC and typeset using MicroSoft Publisher." - this gives some of the articles quite a round trip! This is the only part of the entire Newsletter that has not been on the PcW at some stage of it's life. In fact everything from this sentence has been at some stage!

Welcome to issue 12 of the Newsletter, so far this is on schedule, though I cannot guarantee that it will be by the time that you see it. This Newsletter has taken me longer than any other to produce - I started the first of the MicroDesign tutorials in January and finished it today, the 2nd of April, a long time I am sure you' ll admit.

This issue has also been put together in a rather different way. Some of the articles have been written totally on the PcW,

this has been written entirely on the PC, the MicroDesign tutorial was written using both. This is because I need to be able to have the program I am writing about running on the 9256 while I am writing about it, something that has caused problems before because I have not been able to use two computers with same disc size. Now I am using the PC and PcW side by side, so I have the best of both Worlds - the user friendliness and familiarity of the PcW and the power of the PC. I use Word97 to write the article on the PC, these are then saved to the hard drive as a text only document, before using the PC to PcW transfer part of the Creative Technology View Point software (runs on the PC) to transfer the file onto the PcW discs for final editing and typesetting on the 9256. I will give a brief description of the View Point software at some stage - whether it will be in this Newsletter or a later one I do not know.

If you bought a copy of the club calendar at the beginning of the year you will know a little about this, the competition

Calendar Competition

being to try to name all of the birds printed in it. The winner of the competition was Gwen Hoskins, so the official hand-over of the prize (a copy of the new RoutePlanner software) will be taking place shortly - probably after the next meeting when I will be giving a demonstration of the program, there is a review in this issue.

For those who are not quite so familiar with birds as Gwen presumably is (though nobody managed to get all of them right), here is a list of the correct answers:

January	Wren
February	Eider Duck

March	Peregrine Falcon
April	Tawny Owl
May	Chiffchaff
June	Little Auk
July	Mute Swan
August	House Martin
September	Blackbird
October	Bullfinch
November	Fieldfare
December	Chicken

For the competition I awarded a bonus mark to Philip Jackson, who suggested that the club logo shown for January 1998 could be taken to be a Hoopoe.

A full list of dates and (probable) topics for the meetings this year is printed below. Meetings are held in the Radstock Methodist Church (maps and directions available on request), starting at 7:30pm, everyone welcome. I am desperate for ideas

Diary Dates

for future meetings, so if you have any please let me know. The meeting dates can also be found in the club calendar - there are still some copies of this available at a cost of £1.00 each.

1998

Date	Topic
17th April 1998	RoutePlanner

8th May 1998	PCW to PC, file transfers
12th June 1998	General

I may have a problem with this night; I will let you know in advance if there is

10th July	Pro's/Con's of LocoScript
14th August	Undecided
11th September	AGM - please try to come if at all possible
9th October	Undecided
13th November	Undecided
11th December	General/Christmas Party

(Cakes, mince pies, music etc. - will be something festive to talk about)

I aim to hold a general meeting every six months, I will not (usually) have anything prepared at these meetings, and so they are open to any questions. As a result of the March meeting being held at my house it was decided that PC topics would also be of value. I will accept any questions about PCWs or PCs at the general meetings.

If anybody is considering a hardware upgrade that will require taking the PCW apart, and would be willing to let me do this as a demonstration they should contact me.

I would be very grateful if you could let me know if you will be unable to attend a meeting, and if you could try to arrive by 7:30pm. This saves interruptions that can put me off.

Newsletters are due at the January, April, July and October meetings, though this is subject to a fair amount of change depending on whether I have time to write it or not, the more articles I receive from other people the more likely it is to be on time. Updates will be produced whenever necessary - these will usually be printed directly from LocoScript and so contain lots of pretty fonts, colours and graphics!

The only news that can go in this section this month is that I have heard that Dixons have completely taken over the supply of the PcW16 from Amstrad. The information line about these machines goes directly to Dixons. It is currently uncertain whether there will be any further software produced for these

Hardware News

machines.

RoutePlanner PCW, v1.01/98b

Copyright 1997, Richard Fairhurst/Systeme D

RoutePlanner

Welcome, finally, to the RoutePlanner review. As you know the competition running at the beginning of the year was to name the birds on the club calendars, the winner of this was Gwen Hoskins - congratulations Gwen. Since then I have been looking after the prize for her, a copy of the new RoutePlanner software, waiting to do a formal prize giving at a club meeting - however Gwen has not yet been to a meeting to collect her prize, so I thought I would use for a review before passing it on. It will also be used to give a demonstration at the April 1998 meeting.

Now an apology - normally I would have included screen shots to show what the program looks like, however I have been unable to get any of my normal screen capture programs to work with RoutePlanner, it also appears to completely overwrite a Flipper environment. So sorry, but you will not be able to see any

screen shots this time, so I'll try to describe what can be seen.

General Info

RoutePlanner is compatible with all PCW/PcWs except the PcW16, and requires only 256kb to run, so anybody can use it. The use of RoutePlanner does involve the use of CP/M (enough to scare a few people off), but this is not a problem as the accompanying manual is excellent (and only has four pages so there is not excuse for not reading all of it thoroughly!) and tells you everything you need to know.

Using RoutePlanner is very simple because it uses a "graphical user interface"; similar to the type found within the Network, or on Macs and PCs. To select a function you can do one of two things:

1. If you have a mouse, use it to move the on screen pointer to the relevant part of the screen, and then press the left mouse button once.
2. If you are using only a keyboard, use the cursor keys to move the onscreen pointer to the relevant place, and then press the "2" (the one in the middle of the cursor keys, may also have a grid of SP:CHK written on it). You can speed up the movement of the pointer by holding down the SHIFT key while using the cursors.

Right, let' get down to using the program.

Starting Up

1. Boot up your PCW using your CP/M start of day disc.

-
-
2. When the drive stops whirring, and you see the A> prompt, remove the disc from the drive.
 3. Insert copy of the RoutePlanner disc
 4. Type ROUTE [ENTER]
 5. The PCW will then spend a short time loading the program into memory, finally you will be left at the RoutePlanner screen.

This screen largely consists of an outline map, with major cities and motorways marked on. Not all of Scotland fits on the screen to start with, the rest can be seen by cursoring to the "scroll bar" (a Windows style device - you click the arrow at the top of the bar to move the view up, the arrow at the bottom to move the view down. A similar arrangement exists for the horizontal view).

The map shown looks like this (this is using RoutePlanners own export function):

Down the right
the screen there are
containing the text
Fastest: and
the start these are all
further down there is
of the map, with no
Down at the bottom right hand corners of the



hand side of
four boxes
From:, To:,
Shortest:, at
blank. A little
a smaller copy
markings.

icons, with their function written underneath, the options are avoid, speed, export and quit. I will cover the function of these later on. From now on I will be following the sections in the RoutePlanner manual.

Finding a Route

1. Move the pointer to the blank rectangle at the lower left-hand side of the screen (to the right of the x1, to the left of the scroll bar). Clicking here produces a list of place names in the middle of the screen, starting with Aberdare and going through to Ystrad. I believe that this list contains about 3000 places (this was what it was originally advertised as having, I apologise if this figure is not correct). Press the first letter of the place you are looking for (Radstock), i.e. R. A list of places beginning with "R" will appear. Use the scroll bars and cursor keys to find the place you want, and click on it so that it becomes highlighted. Then click the button at the bottom of the box marked FROM.
2. Press the first letter of the place you are going to (Bath in this case) and repeat the process above, but clicking the TO button at the bottom of the box. Then click on the OK button.
3. The list of names will now disappear, and the two selected names are put into the relevant places in the top box on the right hand side of the screen.
4. You now have a choice, you can calculate the fastest route, or the shortest route - for this example it makes no difference, but it can for longer journeys when motorways become involved. I will want the shortest route in this case, so I click on SHORTEST in the box where it says the place names. The computer will then calculate the route, and tell you the distance travelled in the box, and show the route on the map (for this journey of 8 miles the route plotted on the map is very hard to find - it is much easier

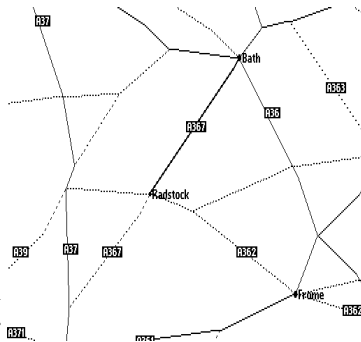
for longer distances). Clicking on either the Shortest, or Fastest (depending on which you originally used) will bring up a journey itinerary, giving a list of roads travelled on, the distance and approximate time, for each road of the journey. You are then given a choice, you can SAVE the list, PRINT the map, or select OK to go back to the previous section - the PRINT option allows you to print to any printer set up to run from CP/M, and is very useful for your actual journey.

Zooming In (or out) of the map

As I said in the last part, it can be very difficult to find the route for smaller journeys on the map. You will also sometimes want to zoom in to see an area in more detail. This is very easy to do.

1. Move the pointer to the place you want to zoom on
2. Press [+] (the SET key, not the plus sign), and the view changes to x2. You can zoom in at different magnitudes, with the number of roads and places being shown increasing at each stage. The maximum that can be shown is a x32 zoom - which is more than adequate for most purposes. (You will not be able to see any villages, only towns, and most small roads are also missed off - to have included things like this would have taken much longer to program - it has taken years as it is).

Maximum zoom view of the route between Radstock and Bath



3. To zoom [-] key (the clear key, or hyphen).

back out, press the key, not the minus

Locating Places.

You can locate the name of any place on the map very easily, clicking on a place or road junction (only appears to work well in one of the zoom modes) and the name will appear in the blank area at the bottom left of the screen.

Changing the Speed Expected

In order to calculate journey times RoutePlanner assumes that you drive at certain speeds on certain roads. To change the speed expected of you click the SPEED (shown by a speedometer at the bottom right of the screen). To change any of the setting click on the speed, and enter the new speed (mph), when you have finished click OK. When calculating journey times RoutePlanner automatically adds an extra time premium if the route passes through cities, suburban areas and towns, unless you are travelling on a motorway.

Avoiding Traffic Black-Spots

RoutePlanner has a feature that allows you to specify particular places to avoid. To tell RoutePlanner to avoid a particular place:

1. Either click the place if it is visible on the map, or click in the area at the bottom left of the screen to find the place using the list of places, as before, clicking the name and then OK.
2. Click the avoid icon (a traffic cone). The place name will disappear.
3. Click the road cone to see which places are being avoided - this also allows you to edit the list if you need to.
4. Recalculate the route using the fastest/shortest options as before.

Calculating legs of a journey

RoutePlanner allows you to calculate up to four separate legs of a journey. Each must be set up as an individual journey using the four from/to boxes at the right of the screen (clicking on one of the boxes will "activate" it). You can then calculate the routes for the different legs of the journey.

Exporting the map

Clicking on the export option (lower right of the screen - shown with a disc icon) allows you to export the image shown on screen to disc as a .MDA file, so that you can import it into MicroDesign for printing.

Summing Up

RoutePlanner is a good, useful piece of software. It is very easy to use and comes with a well-written manual - though to be honest the program is fairly intuitive when you have used it for a while. I am particularly impressed with the speed at which the program recalculates the routes (actually I am even more impressed with the way it calculates routes - a tremendous task). The graphical interface makes a nice difference to the usual PCW software, which relies on text - there is very little text on the RoutePlanner screen.

I have only one complaint, to be fair to everybody while I have been using the software I have been using the keyboard to do everything, not the mouse. I have found this particularly tricky to do, and it can be very slow, using a mouse is much quicker and easier. I will admit that it is also annoying that I cannot get the program to work with Flipper, because I use it quite a bit, and I know that others do as well, however it takes very little time to re-load the computer so it is not really a hardship.

Overall this is an exceptional piece of software, performing a complicated task with the minimum of fuss and technicalities - well done Richard Fairhurst.

(now a bit of information for you. I wrote this article on my PC using Word97, saved it to disc as a text only file, transferred it to a PCW disc and then edited it using LocoScript 4. The file will be taken from LocoScript 4, exported back to LocoScript 3 and then imported into MicroDesign 3 for typesetting - so it has been on quite a journey of its own!)

No new software this month, at least not that I am aware of. Plenty of reviews and tutorials though!

Finally, the club bank account has been opened. After much research it was decided that the best service was offered by Lloyds, and a treasurers account has duly been opened. Details

will be made available at club meetings, should anybody wish to see them.

A warm welcome goes out this month to Alan Sandall, the

Software News

clubs newest member. Unfortunately we have now lost a couple of our members, but the number is staying fairly constant.

Club News

Items for Sale

A place to advertise any computer related items that you no longer want, I will not guarantee anything about the items advertised here. I am starting with a fresh list this time as most of the items on the other had been advertised for a long time.

Items for Sale/Wanted

Ribbons, printwheels, master discs, manuals etc. See Adrian.

Items Wanted

If you have a need for any particular item it can be advertised here, somebody somewhere may have one they don' t

want, or knows where it can e found.

WANTED, 3.5" A drive for 9512, good condition, cheap. See Adrian.

WANTED, 9256 dot matrix printer or any other 9-pin or 24-pin dot matrix, if it has a tractor feed unit. See Adrian.

MicroDesign Tutorial - parts 2 & 3

I am very sorry that there was not a tutorial in the last Newsletter, this was mainly my fault as the Newsletter had to be ready a week earlier than I expected - as well as this I was busy with exam revision. I have now finished the exams and have not yet started the next semester; so this is being written at the beginning of February, even though you are reading it in April (shows how long it takes to put a Newsletter together doesn' t it).

As promised in issue 11 there are two parts of the tutorial

MicroDesign Tutorial 2

here (in theory at least, I have spent four hours working on it so far and have yet to complete the first one). Let' get started.

MicroDesign Tutorial - part 2

Designing a Letterhead

At the end of the last tutorial we should have finished producing a logo for our fictitious recycling company, which was saved on a new disc (called the MD3 Tutorial Saved files disc) as LOGOS.MDA (I know we also had one called LOGOU.MDA but we are ignoring that one for this part of the process) - we are

now going to use this file to produce some headed paper for the company. In the rest of this tutorial I will be making references to fonts to be used, all of these are on the MD3 library disc, I will not specify the size of font which will be used as this will be different on different printer types - I will also assume that people using a 240dpi A4 page will already be aware that the "printable" bottom of the page is significantly different to the "full A4" page that MicroDesign uses (you should leave a gap of about an inch at the bottom of the page on screen or one "page" will be printed on two pieces of paper!).

Step 1.

Boot up your PCW using your MD3 start of day disc, as usual the computer will leave you in the typeset screen. Use [EXTRA][x] to select readout units of mm (you may have to press the buttons several times to cycle through the available options). Go to the very top left hand corner of the page using the cursors and check that the readout (lower left corner of the screen) is 0,0 (i.e., X=0, Y=0), if it is not zero the counter using [EXTRA][0] (that' s a zœr).

Step 2.

Insert the saved files disc in the drive. Select LoadAREA [f1] and choose LOGOS.MDA. Move the box up to the top left hand corner until the X and Y readings (lower left hand corner - the number on the right are the dimensions of the file you are loading) are approximately 30.4 and 18.0 respectively. Press [ENTER].

Step 3.

Now go to the layout screen using [EXIT][L] and select [Box]. Move the box right up into the top left-hand corner of the page. Press [SPACE] to change the "control" point of the box, and enlarge the box so that it is the entire width of the page. Press [SPACE] again to change the control point and move the lower left corner of the box until it has a Y readout of approx. 50.8mm. Press [ENTER].

Step 4.

Go back to the typeset screen ([EXIT][T]) and use the Set [Window] command in exactly the same way as the box command, to make a text box that completely covers the outline of the box that you have just put on the page. When it is the same size press [ENTER] to fix the box. Now just in case something goes wrong select SavePAGE [f6] and give the name HEADED [ENTER] to save a copy of the whole page to disc - if something goes wrong later you will be calling on this to set everything straight.

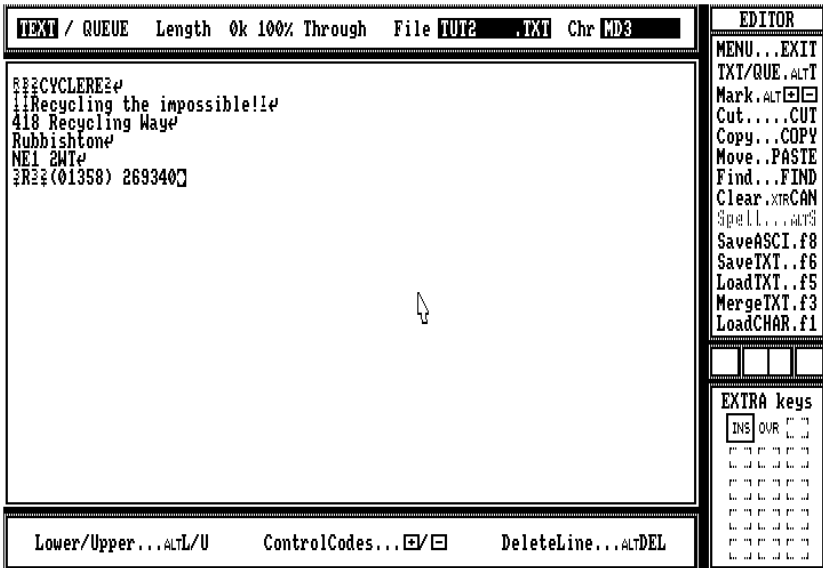
Step 5.

Now go to the Editor screen using [EXIT][E] and type the following ([+] means the "set" key not the "plus" key, likewise with [-] - please do not write [return]. press the return key).

```
[+][1][+][r][+][b]CYCLERE[-][1][RETURN]
[+][2][+][i]Recycling the impossible![-][i][RETURN]
418 Recycling Way[RETURN]
Rubbishton[RETURN]
NE1 2WT[RETURN]
[+][3]R[-][3][+][2](01358) 269340
```

Screen shot 1 - editor screen showing text in place.
 (please note that font codes are incorrect in this)
 Step 6.

Go back to the typeset screen (Using [EXIT][T], as if you didn't know!). You will now need to find your library disc and before inserting it in the drive (I assume you only have a single drive machine) check that the black tab in the lower right hand corner has been moved to leave a hole, so the disc is write protected (just in case - we don't want to save any files here!). Now select LoadFONT [f3], and using the cursors ensure that slot one is highlighted, now press [ENTER] twice to allow you to choose a font, select one of the ones that starts MONOGM (either 45 or 65 probably - I used 65 but this may be too large if you are using a 9 pin printer). Repeat the process to load one of the John



fonts into slot 2 (size 16 or smaller) and a symbol font into slot three (22 or smaller) - if you do not have enough font RAM (you will be told) go back and select a smaller size - if this doesn't help please contact me for help.

This is a good time to point out that the fonts used by MicroDesign are patterns of dots, consequently a larger font is made up of large dots than a smaller one - however if you are using 360dpi you are going to get more of these dots into every inch than if you are using 300 or 240dpi - with a corresponding change in size of the text, as I do not know how much RAM you have available, and the resolution of the printer you are using I am unable to specify exact fonts for you to use - it is a matter of trial and error. The box that we placed on the page earlier is actually a little larger than would otherwise be required to ensure there is enough room whatever size fonts you need to use.

Step 7.

Select [T]ypeset, check that the text to put on the page is highlighted using [f1] - if it isn't cursor to the beginning of the text and press [ALT][+], then go to the end and press [ALT][-]. If this is okay press [ENTER] and then [PASTE] to start the typesetting process. If anything goes wrong with this process simple press the WORD key (number 6 on the numeric keypad to the right of the keyboard), or if you have a mouse click on the cross in the relevant box. Please note that the last E of CYCLERE should overlap the border line a bit - this is intended to happen and you should not worry about it.

Step 8.

You must now go to the Layout screen, by pressing [EXIT][L] and print out a page (using [P]rint). Now if the page looks

alright save it to disk, overwriting previous files. If something has gone wrong reload the previous saved page, go back to typeset, reselect the text in the text window and typeset again using a different font size - I will not give specific advice on doing that here.

Step 9.

You now have the majority of the skills needed to complete the tutorial, I will now longer give a step by step account of what you need to do in every case. I expect you to have learnt certain processes, which will now be used.

Ensure you are in the Layout screen. Use the box function to draw a box across the bottom of the page (please note if you are using a 240dpi page the bottom of the page that you can see on screen is very different to that which can be printed out - I don' know why, but I do know that it is very annoying, you will probably have to use a bit of trial and error to find out exactly what can be printed, please let me know if you need any help with this). The box should be about 20mm deep and should stretch the entire width of the page. Use the cursor readout in the lower right hand corner of the screen to do this.

Step 10.

Return to the typeset screen. Use the Set[W]indow function to draw a text window in the space between the boxes at the top and bottom of the page - don' draw this right up to the edges of the page, but try to keep it central. Now load the following fonts:
Slot 1, John 14
Slot 2 & 3, blank

Now print another copy to ensure that everything is still

printing properly, if not you will have to adjust those parts, which do not. When you are happy with the result, save the page again.

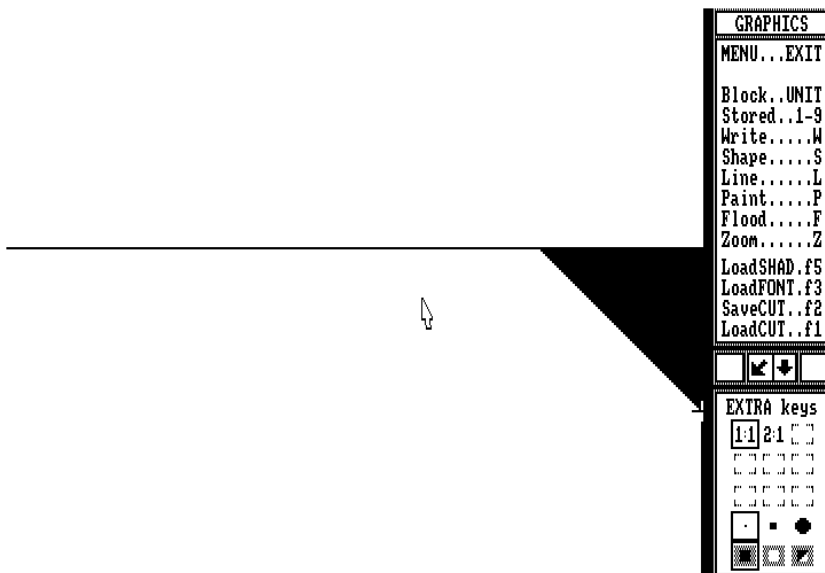
Step 11.

From either the typeset of layout screens select [G]raphics, and move the box so that it covers the lower left hand corner of the bottom box. Select graphics ratio 1:1 (you should know how to do this from last time - in fact the display may already be in this ratio), and move the display left and down until you are right at the corner of the box. Zero the cursor readout. Now move to (10,0) and select [L]ine, and draw a line up to the left edge at an angle of approx. 45 degrees (you should know how to do this from the logo designing tutorial), the line should finish at (0,-10). Press [ENTER], then [F]lood the triangle you have just created with black. Repeat the entire process for the lower left corner of the top box, but this time drawing the line from (20,0) to (0,-20). Now go to the top right hand side of the bottom box and draw another triangle to chop off this corner, this time the line will have to go from (-10,0) to (0,10), repeating the flooding operation from before. See screenshot if you haven' been able to follow all that.

Step 12.

You now have to go to the top right hand corner of the top box (you should be able to see the last part of the word CYCLERE). Using the block function [UNIT], draw a box right from the corner, down between the L and the E, and along the bottom of the letters, press [f5] to invert the selected are. Exit back to typeset, and if all looks okay save the page yet again.

Step 13.



From the typeset screen select SaveTMPL [f8], to save everything as a template file, a template not only stores the page contents, but the fonts and other settings used as well - very much like a LocoScript template. Call the file HEADED4, press [ENTER] to save, and then [ENTER] to confirm that you want to save page contents in the template.

I will come back to this template in a future tutorial, to show how it is possible to use it to write letters on the headed paper (I don' know why anybody would write all of their letters

in MicroDesign, but still, just in case you do, I'll humour you).

Step 14.

This is the very last step. Use the SaveAREA function to save the entire lower box (remember to enclose the entire box before pressing [ENTER]), calling the file BOX

Bye for now - see you in part three, somewhere else in this Newsletter.

(I started this document just after Christmas - I have now finished it and it is April, either these years are getting much shorted, or I have written too much - I'm not sure I want to know which)

The document you should be aiming to produce will be given out at a meeting - which one depends on how much time I have before the meeting next Friday. Things have just got very complicated - I will explain at the meeting.

MicroDesign Tutorial 3

MicroDesign Tutorial 3

Colour Printing

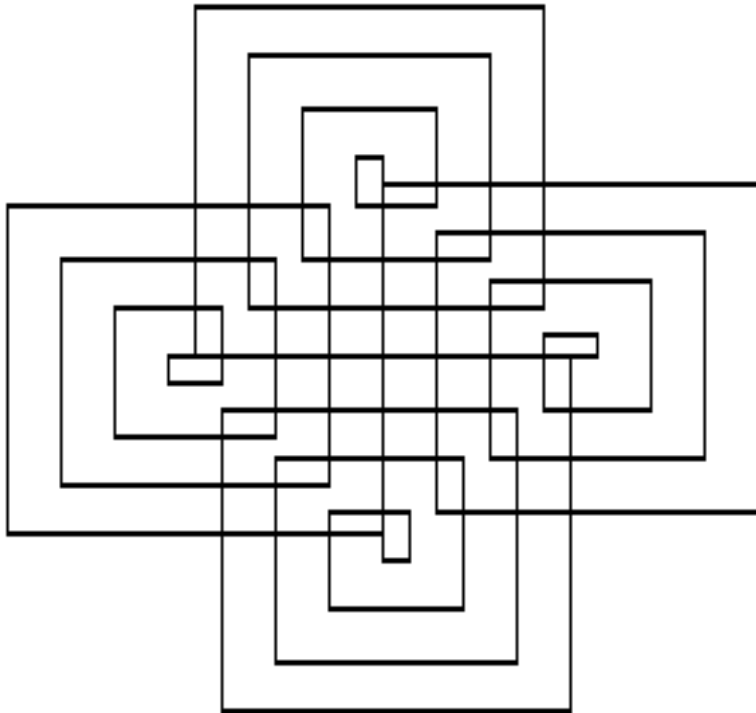
At a recent club meeting it was suggested that I write an article about printing in colour from MicroDesign 3. There are two different ways of producing colour, using a colour printer, or colour ribbons in a black printer (I don't call them black and white because I have yet to find one that actually prints the white as well as the black!). For this I will assume that you have a colour inkjet printer, though exactly the same process is used for a dot matrix printer the colours produced are not as good. If you are using a black printer with coloured ribbons everything is the same, just ignore certain parts of the print queue.

Step one. - Choosing an image.

There is no restriction on the size of image used; it could be a full page of text, a small logo, or a mixture of text and graphics. The only thing to remember is that the more complicated it gets the more likely it is that you will make a mistake later.

For this demonstration I have chosen to use a simple geometric design.

Before I started colouring this picture, I printed out a copy



of this and used coloured pencils to decide which parts should be which colours - a very important part of the process.

In this example I want to print in red, green, yellow, cyan and black, but the printer contains cyan, yellow, magenta and black ink. Green is produced by mixing yellow and cyan, red by mixing yellow and magenta. To mix inks you print one on top of another - as MicroDesign has no way of printing more than one colour at a time (which it thinks is black no matter what the colour happens to be) the paper must go through the printer once for each of the separate ink colours being used - in this case four

times. If you are using an inkjet printer you should find that the paper is fed into the printer in the same place each time, using another type of printer you may have to be careful to line it up by eye.

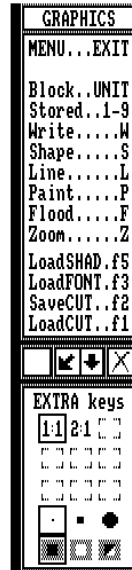
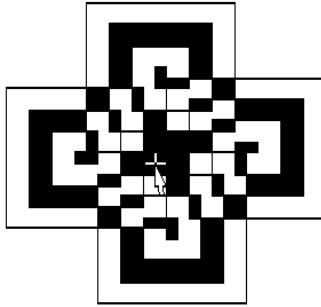
Step two. - Black parts of the picture.

1. Boot up MD3
2. Load up the image (or page) that you want to print in colour, before going any further zero the cursor readout by pressing [EXTRA][0].
3. Go to [G]raphics, ratio 1:1 (see earlier tutorials if unsure about how to do this) and [F]lood (in black, not grey which is the default setting) any areas that you want to appear black. For this, I do not need to do anything as I only want the lines to be black.
4. [EXIT] back to Typeset. Insert a blank disc in the drive and save the PAGE (using [f6] as BLACK.MDP.

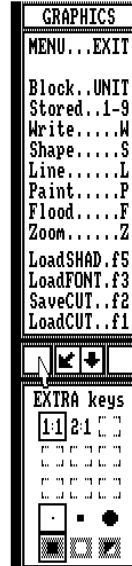
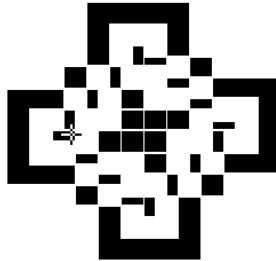
Step three. - Cyan parts of the picture.

1. Load the original image back onto the screen, and zero the readout.
2. As before go to graphics.
3. Again, [F]lood the areas where you want the cyan ink to go. This will be any part that you want to be cyan, green or blue. See screenshot below for my image:

4. [EXIT] back to typeset again. Select LoadAREA again and find the original file, but DO NOT ACTUALLY LOAD IT YET.



5. Press [EXTRA][PASTE] to change the load function into EXOR mode rather than the normal opaque mode. This means that any lines that appear in both the original file and the new version will be removed - so the black lines will go leaving only the areas that need to be filled with cyan ink.
6. Ensure that the area is about to be loaded in exactly the same place as before, i.e. at cursor position (0,0), please do not zero the cursor readout here, just move the box using the cursor keys.
7. Press [ENTER], and then go back to graphics to check the result. Although yours will obviously look different to mine as you will not be using the same shape, my example now looks like this:
8. Go back to typeset and save the page as CYAN.MDP
9. Clear the page.



Step four. - magenta parts of the picture.

This is the same as step three, but flood the areas that must be magenta, red, or blue. Save the page as MAGENTA.MDP

Step five. - yellow parts of the picture

Again, this is the same, but flood the areas that must be yellow, red, or green. Save the page as YELLOW.MDP.

Step six. - The print queue.

In order to get all of the different parts of the picture to print in the correct colours a print queue must be used. If you have never used one of these do not panic - they are really not that complicated.

Before we start you, need to know that to change the colour of ink the printer is using you have to send an "escape code", the codes you need to send are shown below:

Black ink Code 0

Magenta ink Code 1

Cyan ink Code 2

Yellow ink Code 4 if anyone can tell me why this isn' t code 3 I would be very grateful!

To enter a print queue you must first be in the editor section, so to get there from typeset.

1. Press [EXIT][E]ditor.
2. To enter the queue editor press [ALT][T]
3. Now enter the following exactly as written

```
*codes 27 r 0
```

```
*a:black.mdp
```

```
*formfeed
```

```
*codes 27 r 1
```

```
*a:magenta.mdp
```

```
*formfeed
```

```
*codes 27 r 2
```

```
*a:cyan.mdp
```

```
*formfeed
```

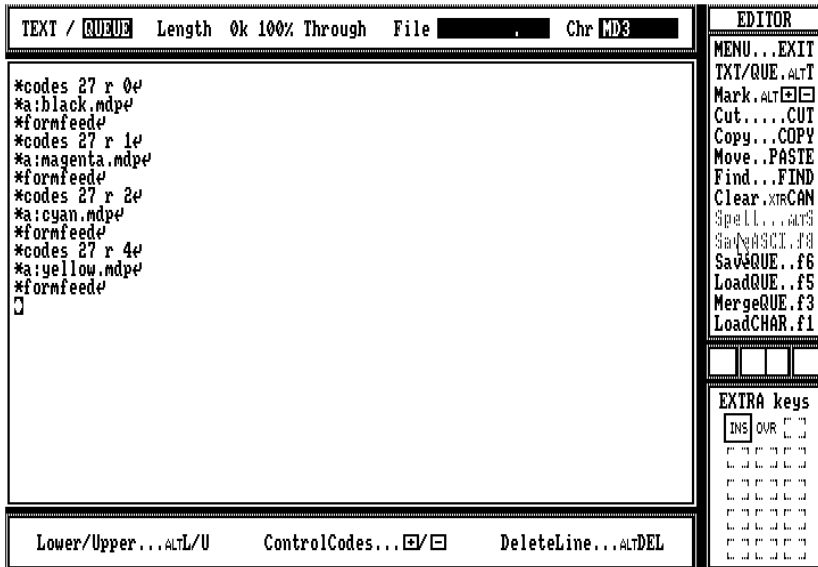
```
*codes 27 r 4
```

```
*a:yellow.mdp
```

```
*formfeed
```

so that the screen looks like the one below:

4. Select [f6], SaveQUE to save the queue to disc, give it the name COLOURS.MDQ



Step 7. - Printing

Set up your printer so that it is ready to print, with one piece of paper ready to use.

1. [EXIT][L]ayout.
2. Select [P]rint
3. Make sure the options read as follows

Print: QUEUE

Scale: FULL

Length: FULL PAGE

FmFeed: OFF

4. Press [ENTER]. When it has finished printing the page, quickly put the paper back through the printer, ensuring you have it the correct way up.

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-
5. The next step depends somewhat on the type of printer you are using. You may need to change ink cartridges or ribbons at this stage.
 6. If a message appears on the screen telling you to insert paper into the printer and press a key, or something similar do as it says.
 7. Repeat the process until all of the colours have been printed, hopefully in the correct places.
 8. Sit back and marvel at the picture you have created, or, more usually on the first attempt, hide it out the way in case somebody else sees it.

This process can also produce impressive results using LocoScript 4 - you do not have to worry about a print queue, just select the relevant colour and then load the separate images on top of each other. It all prints in one go and you do not have to worry about feeding the paper back through the printer again.

You can produce many different colours in this way, it even makes a slight difference which order the colours are printed, for instance you get a different green when the cyan is printed first than you do when the yellow is. The choice can be multiplied by having "shades of grey" rather than "solid black" when you use graphics to flood the areas with colour.

No time for a programming section as something has come up. I will explain at the meeting.