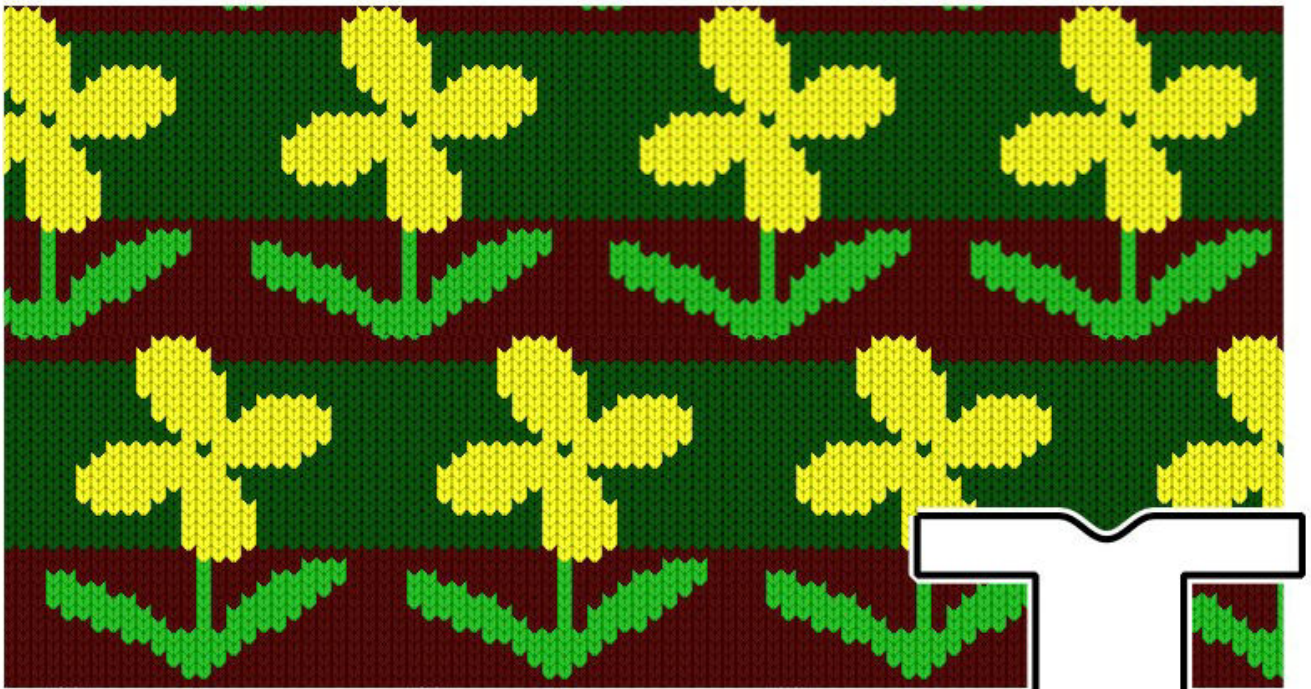


Fair Isle



The Knitting pattern designer
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iSV
Products

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APDL

FairIsle

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Introduction

FairIsle enables you to design Fair Isle knitting patterns on the computer. It is particularly suited to making designs for a knitting machine, but you could use it for handknitting too. The usual method of designing Fair Isle knitting patterns is to use graph paper to start with, then transfer the pattern to a punch card and knit a few swatches.

This can be a time-consuming process and it is difficult to imagine what the result will look like without making a swatch. FairIsle shows you a picture of the swatch in a window and allows you to edit the punch card and colours used. It is easy to try out designs and you can see the effect of any changes you make immediately.

The example on the front page of this manual showing the flowers is a direct output from FairIsle. This shows you how accurately FairIsle can simulate the effect of a real piece of knitting.

What is a Fair Isle design?

There are essentially two elements to a Fair Isle design. The punch card pattern and the choice of colours. There are two colours in each row (ie two lengths of yarn), the punch card determines which of these is used for each stitch. The yarn that is not used is carried along the back of the knitting until it is needed - this is called a 'float'. The colours can be changed every row if need be, though most designs are not so complex. Some designs use the same two colours throughout.

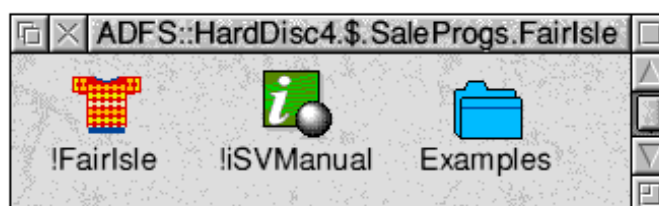
Punch cards are usually 24 stitches across so the pattern repeats across the knitting every 24 stitches. (Electronic knitting machines are more flexible). Punch cards can be any length though the pattern often repeats vertically as well.

Before you Start

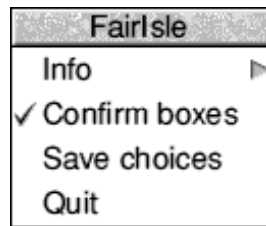
FairIsle supports interactive help, so you may like to start the !Help application, or another program that displays interactive help messages. FairIsle will run in any screen mode but you should change to a mode with at least 256 colours or the display will be poor. It is also preferable to use a mode with square pixels (e.g. Mode 28).

Starting FairIsle

Load !FairIsle in the usual way (SELECT double click). As you can see there is also a set of example files that provide some ready made patterns.



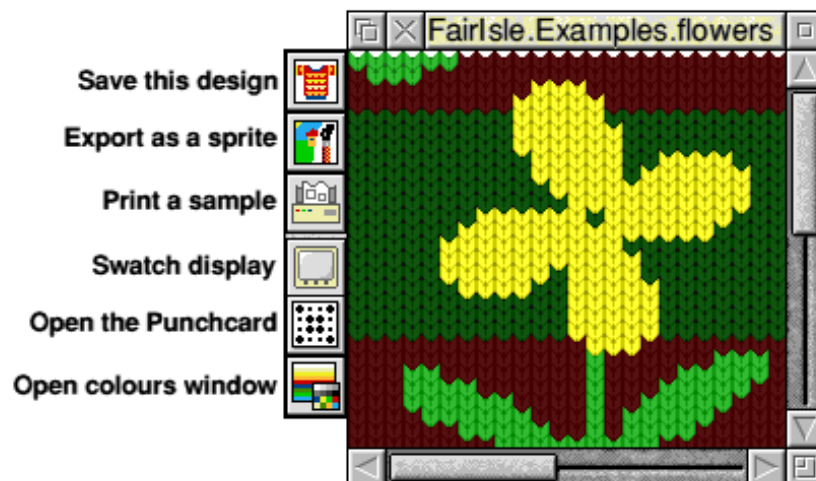
Once FairIsle is loaded clicking MENU on the icon bar icon will open the icon bar menu. From here you can find out which version of FairIsle you have (Info), turn Confirmation boxes on/off (we recommend this is left on at first), Save your current choices (Save choices) or quit the application (Quit).



If you click SELECT on the FairIsle icon on the iconbar then the three design windows will open. These are the "Swatch" window, the "Punch Card" window and the "Colours" window.

The "Swatch" window

The main window or 'Swatch' window shows a sample of the current pattern.



Along the side of this window is a toolbar which quickly allows you to access the menu options for this window. Save will save the current design in FairIsle format. Export will save out a sprite. Print will print the current swatch. Display will open the "Swatch Display Settings" window. The other options open the relevant window.



Using the Swatch window

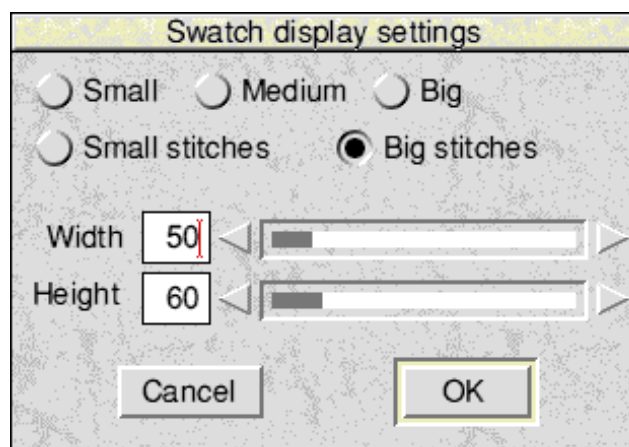
Clicking SELECT in the Swatch window changes the colour of the stitch clicked on to the currently selected colour (as chosen in the "Colours" window).

Any other stitch in the same row that would belong to the same piece of yarn in a real swatch are also changed. Stitches in other rows may also be changed depending on the colour cycle number (see Using the Colours window).

Clicking ADJUST in the main window allows you to 'pick up' the colour under the pointer. The colour will become selected in the Colours window (if it is open) and you can use it to colour other stitches.

Swatch Display Settings

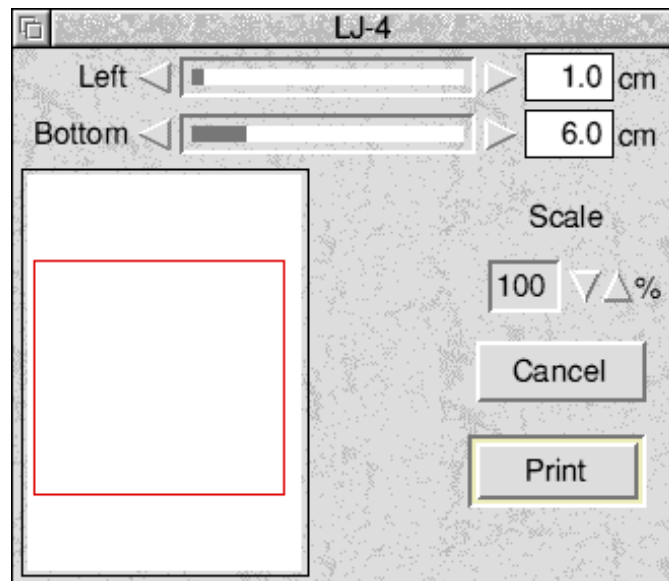
Clicking on the "Swatch Display" icon on the Swatch window toolbar will open the display settings window.



This allows you to change the way the swatch is displayed. The width and height (in stitches) can be altered by using the arrows or sliders. You can also choose how each stitch is displayed. Big Stitches gives the most realistic picture. Small stitches is useful if you have a large design or a low resolution monitor. You can also choose squares of three different sizes. Sometimes it is easier to see what is going on in a complex design with squares. Changing settings here will also alter any print out that you produce using the Print option.

Printing the Swatch

When you choose Print from the Swatch window menu, or press the PRINT key, a window will open to allow you to set the printing options and print that swatch.



You can adjust the position of the swatch print using the arrows or sliders near the top of the window. The figures next to the two sliders show how far the swatch sample will be positioned from the bottom left of the paper.

You can adjust the scale of the print using the arrows below the word Scale. You can of course also alter how the swatch will be printed using the "Swatch Display Settings" window.

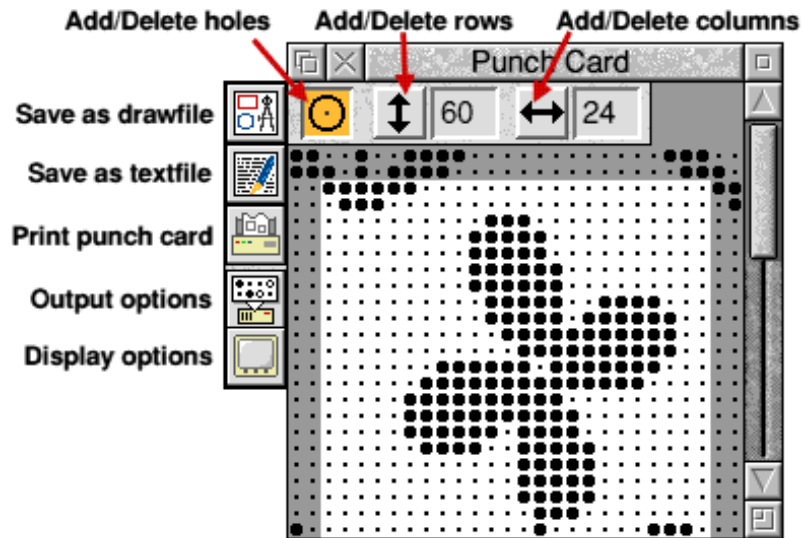
Big Stitches at 100% will give 7 stitches across and 9 rows per inch, ie about the size of a real piece of knitting using typical yarns and tension settings.

If you want a smaller print, it is best to reduce the print scale rather than choosing Small stitches. If you have loaded a printer driver, you will be able to see a small picture of the page and print margins with a red outline showing where the swatch will appear on the paper.

When you have arranged things the way you want, click on the Print button to print the swatch. If you don't want to print then clicking on Cancel will close the window.

Punch Card Window

This window shows a representation of the punch card.



The central white rectangle shows the actual punch card, while the grey border shows a couple of extra rows and columns which show how the pattern begins to repeat.

The three tools along the top of the window work with both SELECT and ADJUST. For example to add a hole select the hole tool and click SELECT in the right place. To remove a hole click ADJUST in the right place. Changes to the punch card are reflected immediately in the Swatch.

Punch Card Menu

Pressing MENU over the Punch Card window will open the Punch Card menu. Some of the options on this menu are also available on the toolbar to the side of the window.

Unit	
Export	▶
Print	▶
Output details	▶

Display	▶

Blank	^B
Invert	^I

Auto	^A

Export

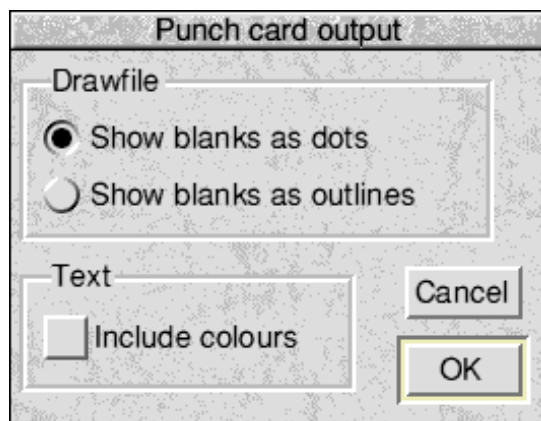
This allows you to save the punch card pattern as a textfile or as a Draw file. This is intended for copying onto a real punch card. You can't reload these files back into FairIsle.

Print

This allows you to print the card as a Draw file. It will be split over more than one page if necessary. (You can print the punch card as a text file by using the Export item and dragging the text icon to the printer).

Punch Card Output details.

This allows you to control exactly how a punchcard is exported or printed.

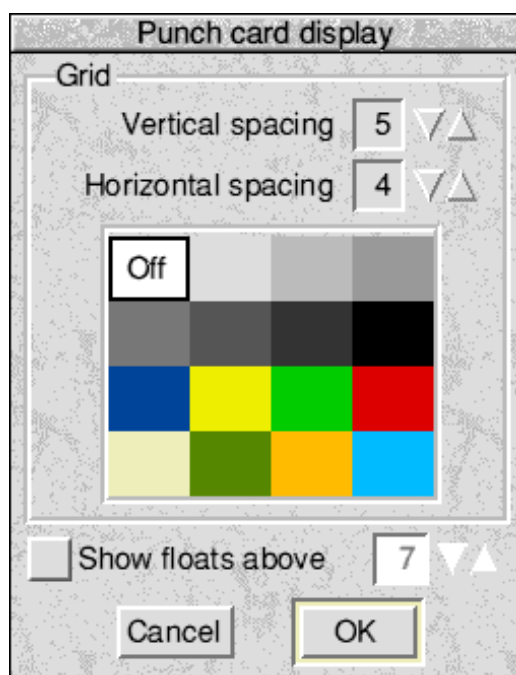


For a Draw file output, you can either choose to show the blanks as dots or as outline circles.

For text output, you can choose to include colour names.

Punch Card Display

This allows you to choose whether you want a grid to be displayed over the punch card, and to set the grid spacing and colour.

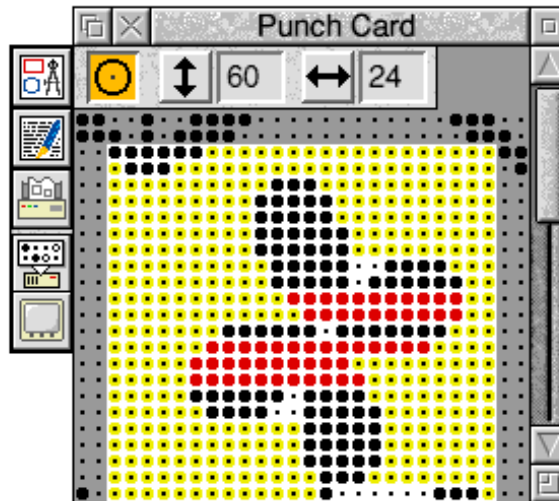


Alter the spacing by using the arrows, and choose the colour you want by clicking on it. You can turn off the grid by selecting the 'Off' button.

You can also choose to display long floats, where 1 colour is not used for many stitches, by clicking on the "Show floats above" button. Use the arrows to adjust the largest number of stitches you want in a float.

Punch Card Display (Floats)

When the "Show floats above" option is selected any floats which are longer than the largest number of stitches will be shown in the punch card.



Long runs of holes will be shown in red instead of black, while long runs of blanks will have a yellow circle around them. This is shown in the example on the right.

The exception is when an entire row of the punch card is all holes or all blanks, since then you only need to use one yarn, and have no problem with floats.

When you have made your choices for the punch card display, click on OK.

Punch Card Menu editing

Blank - This clears all the holes from the punch card.

Invert - This option makes a negative version of the punch card.

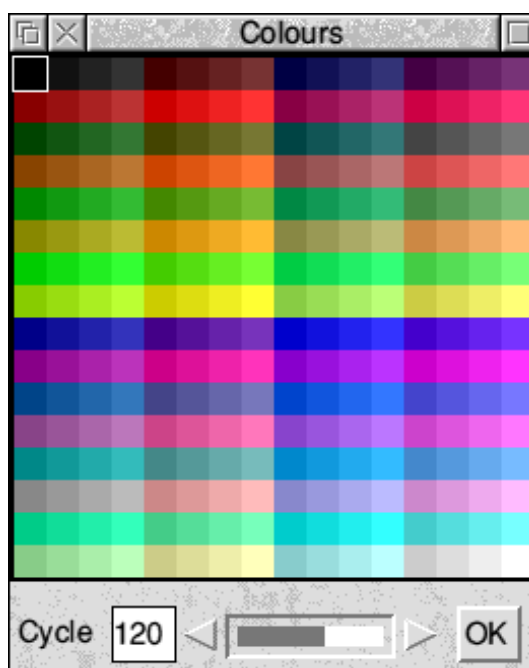
Holes become blanks and blanks become holes.

Auto

This option makes FairIsle generate a new punch card automatically. These are always 24 stitches wide but vary in height. The colours are not changed. You will see that the file name in the Swatch window title becomes <Untitled>. This is because it is regarded as a new design, not an edited version of an old one. Remember you can edit these automatic patterns to change things you don't like. For those who like technical details FairIsle uses a cellular automaton to generate the patterns. The pattern is made to repeat every 24 cells. Both the seed and the rules are chosen at random, and the cellular automaton is run for a few hundred iterations. Very simple patterns (ones that repeat very quickly) are discarded, and a new seed and rule tried until a more interesting pattern is generated.

Using the Colours window

This is opened by the button on the toolbar at the side of the swatch window. Colours can be made smaller using the toggle button.



To choose a colour for a yarn, click on it. You can then change the colours of stitches in the Swatch window. In knitting designs the sequence of colours often repeats after so many rows. To save time you can use the "colour cycle number" at the bottom of the window, which determines the number of rows before the sequence of colours repeat. You have to click on "OK" before it takes effect.

Colour Cycle

If you set the "colour cycle number" to 10 for example, you will see that changing the colour of a stitch in the Swatch window will affect not only the row you clicked on, but every tenth row up and down from there.

Typical uses

If you want the same two colours throughout, set the colour cycle number to 1, then choose the colours for any row in the Swatch window and the rest will be set automatically.

If you want to vary all the rows independently, use a big number like 200, which effectively turns this feature off. If you want the colours to repeat in step with the pattern, set to the same value as the height of the punch card. Double and half the height of the punch card are often useful as well.

Design from scratch

Initially the colours are white and black for every row. The punch card is blank, so the swatch appears all white, since the second colour (black in this case) is not used.

If you draw with SELECT in the Punch Card window, you will be able to make 'holes' in the punch card, and see that the same pattern is repeated throughout the swatch in black stitches.

Now choose a colour from the Colours window (just click on the colour you want) and try clicking in the Swatch window. You will see that the stitch you clicked on changes to the chosen colour, and that other stitches in the

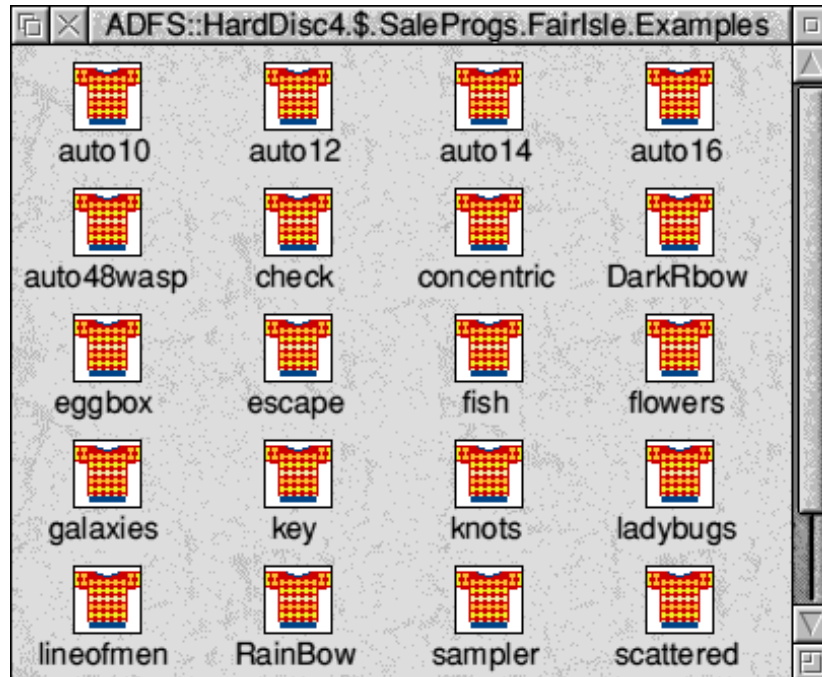
same row change too - all the ones that would belong to the same yarn in a real swatch.

These are the two most important editing operations in FairIsle.

- Altering the punch card.
- Choosing the two colours you want for each row.

Example Files

These are examples of designs made using FairIsle. To have a look at one, drag it into the Swatch window (or double click). Note that when you load a file it replaces the existing one, so if you don't want to lose the old one, make sure you have saved it first.



Loading Files

You can only load FairIsle files of the right format into FairIsle. If you drag such a file into the Swatch window, it will replace the existing file. You can also drag a file to the icon bar icon with the same result.

If you drag a file into the Colours window then just the Colours will be loaded. The punch card will remain as it was.

If you drag a file into the Punch card window then just the punchcard will be loaded, and the colours will stay as they were. This can be useful for making new designs by combining old ones.

For example, load the "Rainbow" file into the Colours window, then try dragging any of the other examples into the punch card window. You'll get the rainbow colours with a different pattern. When you make a combination in this way, the filename in the Swatch window title becomes <Untitled>. This is because it is regarded as a new design, not an edited version of an old one, and stops you accidentally over-writing one of the existing designs.

Outputting punch cards

Draw files

If you choose to show the blanks as dots the result will look very like a real punch card. If you choose outline circles and print the punch card, then by laying a real punch card over the paper, you will be able to see which holes need punching.

Text

If you don't include the colour names, the output will consist of one line of text for each row in the punch card with holes shown as '*' (asterisk) and blanks as '-'. If you include the colour names, there will also be two names on each line for the colours. The names are a rough guide only.

There may also be more lines of text in this case, since FairIsle outputs lines until the colour cycle number is reached if this is bigger than the punch card height. The punch card pattern is continued into any extra lines, but with '+' instead of '*' so you can see where the first repeat begins.

Not enough memory?

FairIsle does not use much memory most of the time. The main things that affect how much it uses are:

The width of the punch card.

The height of the Swatch display.

How each stitch is displayed. (Big Stitches use more RAM).

Squares use very little.

The most likely time you may not have enough memory is when printing or saving a large swatch. In this case both the width and height of the swatch display are important. If you don't have enough memory for the output sprite, you will have to reduce the size of the swatch or use small stitches or squares. The other time you may not have enough memory is when exporting or printing a large punch card as a Draw file. If you don't have enough memory for the output Draw file, you will not be able to do this.

Keyboard short cuts

FairIsle has a few key short-cuts. Remember that keyshort-cuts only work when the appropriate window has the 'input focus', i.e. it has a cream title bar. This is usually the last window that you clicked in.

Swatch window

- F3 - Save the design.
- PRINT - Print swatch.

Punch Card window

- Control-A Automatic Pattern.
- Control-B Blank the Punch Card.
- Control-I Invert the Punch Card.

Saved settings

When you click on the "Save Choices" option from the icon bar menu FairIsle will save the following information:

- Swatch width and height.
- The stitch type.
- Punch card width and height.
- Colour cycle number.
- Grid spacing and colour.
- The maximum number of stitches you want in a float.
- Swatch print options (position and scale).
- Punch card export details for Draw files and text.
- The Confirm Boxes setting from the icon bar menu.

When FairIsle is next re-loaded these settings will also be re-loaded.

Problems loading FairIsle on RISC OS 3.7 or earlier?

If you have a problem loading FairIsle and you are seeing some unusual error messages, for example:

Module System:Modules.BorderUtil not found
or
You need toolbox 1.23 or later to run !FairIsle

Or any other errors relating to missing modules then you will need to run the **!FairMods** application supplied with FairIsle. This application will copy components into your !System folder that are needed by FairIsle.

!IMPORTANT - You should only run the !FairMods application that comes with FairIsle if you are running RISC OS 3.7 or earlier and are having problems. If FairIsle is loading correctly then running !FairMods may cause system instability and you could end up with a broken !Boot sequence.

Once you have double clicked on FairMods and it has completed copying files then you should be able to run FairIsle.

Here are just a few of the other products you will be able to
download from RISCOS.com free of charge
(You can make a donation to help support future product releases but this is entirely voluntary)



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