

DesignaKnit 9



DesignaKnit 9 User Manual
for product level
Complete

Part 4 of 5: Interactive Knitting

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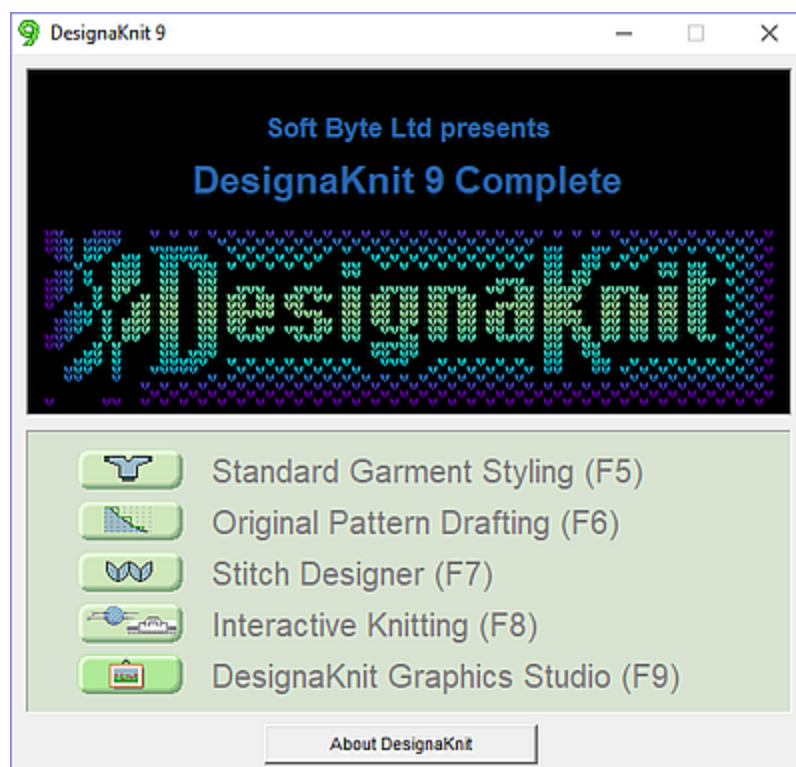
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Welcome

Welcome to DesignaKnit 9 in which a huge variety of stitch patterns and garment shapes can be designed. Unique designs can be created by using different elements of DesignaKnit and the results of working in the different sections can be combined and used in Interactive Knitting to physically knit the designs.

As each of the sections offers unique possibilities, the manual is constructed in such a way that the relevant information is always accessed from the section that is currently worked in so that, for example, when Standard Garment Styling is worked in, accessing the manual will present Standard Garment Styling specific help.

Each of the sections can be accessed from the opening screen (as shown on the right) by clicking on the relevant button or pressing the corresponding F-key on the keyboard. These buttons and F-keys can also be used within DesignaKnit to switch between most sections.



Clicking the "About DesignaKnit" button at the bottom of the opening screen will display information about the current version, which can also be accessed by the *Help / About* menu option within each section.

DesignaKnit 9 offers four **product levels** that can be purchased or upgraded to. The current product level is reflected in the opening screen. Each product level is tailored to a different use, where the Complete product level has it all, the HandKnit product level does not include any options for knitting machines and neither of the Machine product levels contains options for hand knitting. Original Pattern Drafting is not included in the Machine Standard product level. More information can be found on [Soft Byte Ltd](https://www.softbyte.co.uk/designaknit.htm) (<https://www.softbyte.co.uk/designaknit.htm>). The different options for each product level have been explained in the different program sections if necessary.

For first time users it is recommended to look through some of the video tutorials ([See page 286](#)) and read through the "Work flow" and / or "Buttons and Menus" chapters as a way of getting to know DesignaKnit and its possibilities.



Standard Garment Styling - allows creating and amending of complete garments. Basic shape files are provided to be used and altered or completely new garments can be designed easily by using the step by step guidance. Standard size tables are provided as well as an option to create custom sizes for intended wearers, to ensure a good fit for all body shapes and sizes. Standard Garment Styling is a great starting point to get to grips with the screen layouts and concepts of DesignaKnit.



Original Pattern Drafting - allows complete freedom of designing shapes and garment pieces. A piece may be started from scratch on a blank workspace, or shapes may be drawn in from various other sources and worked on until the desired result is achieved. Garment shapes from Standard Garment Styling can be opened, outside patterns may be used to create pieces and stitch patterns from Stitch Designer can be applied. Once designed, the pattern pieces and knitting instructions can be printed in a variety of ways and Interactive Knitting can be used to follow knitting instructions on the computer screen or, if the computer is connected to a knitting machine by a cable link, knit interactively.

This section of the program is not available in the Machine Standard product level of DesignaKnit and will present the warning as shown on the right when trying to access it.



This option is available only in these DesignaKnit product levels: Machine Pro, HandKnit, Complete.



Stitch Designer - allows stitch patterns to be created, saved, amended and integrated into (garment) pieces by using a wide variety of tools including Stitch cables and Lace patterns. An extensive selection of stitch patterns is provided together with many tools to create unique and individual designs from scratch.



Interactive Knitting - provides row by row, stitch by stitch instructions on what needs to be done at the knitting stage. If there is a cable link in place, garment pieces and swatches can be machine knitted interactively, otherwise the instructions can be read and followed on the computer screen.

Seeing the knitting instructions for the current (garment) piece on the screen can be easier and more accurate than following a printed chart or pattern text instructions. If a cable link ([See on page 275](#)) is connected the appropriate instructions will be sent to the knitting machine and the Interactive Knitting screen is automatically updated with each pass of the carriage or lock. Stopping the cable link connection can be very useful to 'test run' knitting a piece to check for difficulties or see how pattern instructions will work out, as moving up and down the pattern rows can be simulated by using mouse or keyboard keys.

Different Progress windows present different, complementary views and the knitting process can be followed row by row, while keeping an overview of where it has progressed to in the piece. Knitting can be stopped and resumed in the same place by setting a 'Bookmark' for hand knitting or by using the 'Stop' button in machine knitting in the Left Toolbar. Casting on and off, increasing, decreasing, placing markers, changing colors, instructions for cable crossings etc. can all be indicated.

As well as Alerts that may have been set in Stitch Designer, specific Interactive Knitting alerts can be set up and used to notify of actions to be taken and draw attention to certain positions in the knitting where manual intervention may be needed.



DesignaKnit Graphics Studio - allows a wide variety of graphics such as line drawings, photographs, pictures, scanned charted designs or any other supported graphic file format to be converted into stitch patterns. Different options regarding size, colors and amount of detail can be tried and tested by using the buttons on the Left Toolbar or by using the provided Wizard tool, which can be accessed at any time to step through the process in a logical way. Once the options are set as required, the stitch pattern can be converted to Stitch Designer, where it can be amended further if necessary and applied to (garment) pieces.

We hope you enjoy using the program and wish you many happy hours of designing and creating.

What's new

The program is continually improved and can be updated at regular intervals ([See on page 194](#)).

A complete list of the DesignaKnit 9 new features can be found on the [Soft Byte Ltd](https://soft-byte.co.uk/DK9UpgradeForms/DK9_upgrade_features_F.pdf) site (https://soft-byte.co.uk/DK9UpgradeForms/DK9_upgrade_features_F.pdf).

General

Default folders - there are now separately configurable default folders for shapes, stitch patterns and graphic image files. They can be changed in the *File / Default Folder* menu option in Standard Garment Styling, Original Pattern Drafting, Stitch Designer and DesignaKnit Graphics Studio and can be set independently of each other. The option to revert to the original default path is also provided. This last option is available only after a user defined path has been opted for.

License key - if the License key and lace number are entered as a Windows Administrator user all users of that computer will thereafter have access to DesignaKnit 9. If a Standard (limited) Windows user enters the numbers, the program will most likely not be accessible to other Windows users on the same computer until they enter the numbers to complete the installation process. This is due to the different read / write access levels of Administrator and Standard users on the system.

Notes - the 'Notes' sections for shape files in the Tension dialogs of Original Pattern Drafting and Stitch Designer and for stitch patterns in Stitch Designer (*Edit / Notes*) have been extended to contain 4000 and 360 characters respectively.

Thumbnails - more information is displayed in the thumbnails, such as the knit method, and stitch symbols are presented correctly in the preview. If stitch patterns have been integrated with garment pieces, a small symbol will appear on the relevant pieces in the Thumbnails view. Additional check boxes have been provided in the Thumbnails Search section to easily limit the search to the relevant criteria. The Embedded Text field can now be used to search on file names of integrated stitch patterns or background image graphic files as well as the notes that may have been entered in the Tensions dialogue.

Printouts - the rendering of fabric texture in the Stitch Pat Picture and Garment Picture printout formats has been improved and more closely matches the Stitch Designer screen. Stitch Template and Integrated Template printouts for Jacquard patterns have been improved when row numbers are included and now include Colour Changer and Jacquard yarn sequence information where required.

Colour Changer - the use of a Colour Changer is now a property of a stitch pattern rather than a property of the selected knitting machine, and can be set in *Options / Method of Knitting*. Different stitch patterns can be saved with different Colour Changer settings, which means that it is no longer necessary to adjust the Changer setting for each pattern that is currently being knitted or printed. Yarns can be assigned to Colour Changer feeder positions by assigning Memo numbers to the yarn colors in the *Palettes / Memo* menu option in Stitch Designer.

Passap - technique numbers for the Passap 6000 and 8000 are better supported. They can be assigned to a stitch pattern at the design stage and will be saved with the pattern. A default technique number can be set in the Knitting machine setup and will be allocated to new stitch patterns when they are created.

Standard Garment Styling

An enhancement has been made by displaying the units of measurement in centimeters or inches in more places.

Original Pattern Drafting

As well as general enhancements such as improved selecting, aligning and distributing points and better viewing possibilities, new options have been added in DesignaKnit 9. They include a "Background Image" option, "Construct a slope", "Measured Adjustment", Bezier curve types when curves are created, the possibility to overlap pieces to result in different shapes and a versatile new way to start a (garment) piece.

Stitch Designer

Shadows & Outlines and a new Curve tool are the main additions to DesignaKnit 9. Improvements and enhancements have been made to several of the Design Tools, such as adding a 4-way spiral symmetry option to the "Mirrors" tool, improved "Tiling", changes in the "Integrate" options and additions and changes to the Brother Stitch World patterns.

Interactive Knitting

A "Knit as one section" option has been added so that side seam edge shaping can be combined with a Cut and Sew neckline.

Knit as one section - when a piece normally requires knitting in more than one section, such as when a piece has a neckline, the option to "Knit as one section" is offered as long as the method of knitting is not Jacquard or Intarsia (using the AG50).

Progress Windows - have clearer instructions and markings, such as better labelling of the color blocks in the Yarns window and Rib and blousing information in the Countdown + Shaping Instructions window for Standard Garment Styling garments.

Feeder information - the notation of the feeders is improved and shows the Colour Changer position and Jacquard yarn sequence numbers where appropriate.

Resume knitting - the convenient new *Go / Resume at Bookmark* (when hand knitting) or *Go / Resume from Last Stop* (for machine knitting) option can be used to resume knitting from the last 'stopped' position.

Passap - When knitting a Shape-only with Passap E6000, E8000, or Duo, the Passap technique number (or number of lock passes per row for Duo) is now included with the Shape-only options.

DesignaKnit Graphics Studio

The way that images are dealt with in DesignaKnit Graphics Studio has been greatly improved.

Overview of the Screen

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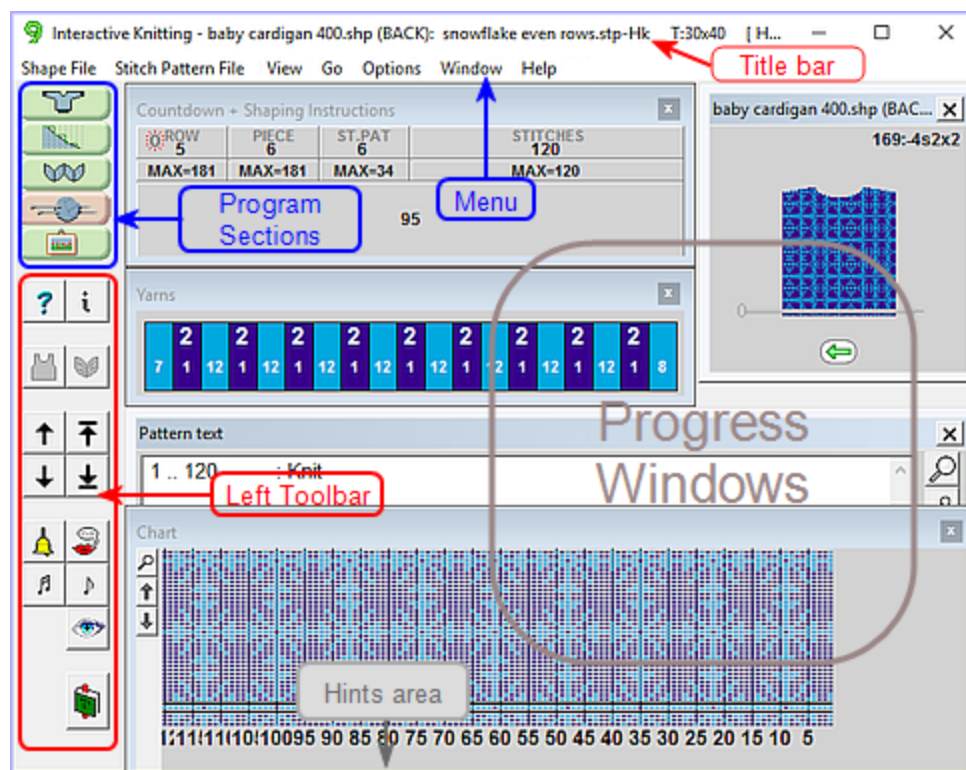
The contents and layout of the Interactive Knitting screen depend on which product level of DesignaKnit is used ([See page 1](#)), which method of knitting is used, which Tile arrangement has been used for the Progress windows ([See page 65](#)) and whether a swatch, shape-only or integrated garment piece has been selected for knitting ([See on page 96](#)).

The screen that is shown below contains all the possible Progress windows as it shows an integrated shape: a garment piece with an integrated stitch pattern. All Progress windows will also be present if a pattern contains stitch cables.

The "Yarns" window will be absent for a Shape-only garment piece and a swatch with only one yarn color as it is unnecessary. It is present for an integrated stitch pattern or a swatch with more than one color. When read together with the "Pattern text" window, the "Yarns" window will indicate the stitch type and when to knit each color for hand knitting, while for machine knitting, it will indicate when to thread, swap, change and use colors.

Hand and Machine knitting can be switched easily in the Complete Product level of DesignaKnit in *Options / Method of Knitting*. However, switching the method will apply this change for the stitch pattern or shape file from then on, without any further "Save" action ([See page 29](#)).

Hand knitting Screen



When viewing this manual on the computer, the cursor may be hovered over the image. Where the cursor changes to a hand it can be clicked on as a quick way of getting to the relevant section.

The **Title bar** displays information about the section of DesignaKnit that is currently used (which in this case is Interactive Knitting), as well as the name of the shape file, garment piece, stitch pattern with its method (See page 206) and the current tension (T:30x40).

The **Hints area** shows additional information if needed, such as a description of each menu option as the cursor is

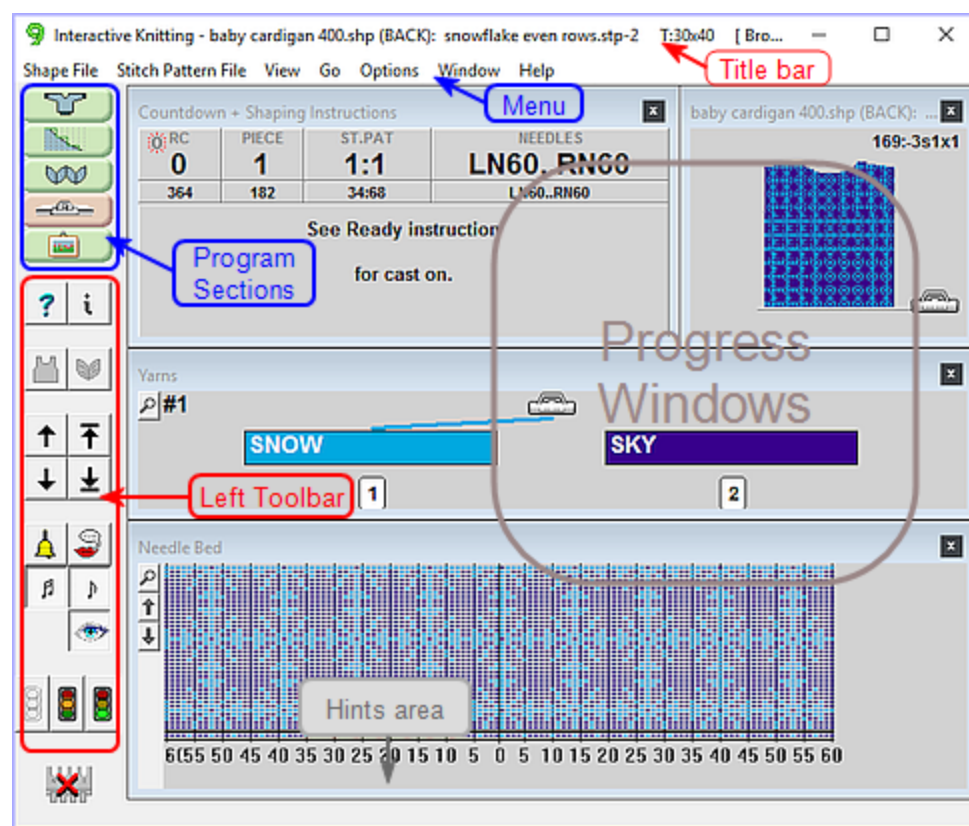
hovered over it.

The screen contains 'Progress windows', displaying position and knitting progress for the current piece, in different and complementary ways.

The "Countdown + Shaping Instructions" window (See page 65) displays the information pertaining to where the knitting is in the piece in a numeric format. The "Yarns" window (See page 70) can display graphic data as shown in the image here, or can refer to the "Chart" window. The "Pattern text" (See page 82) window shows knitting instructions for the current row that Interactive Knitting is processing. The "Chart" window (See page 84) displays a graphic view of part of the piece that is being worked, and the "Piece Overview" window (See page 92) at the top right of the image shows the entire piece that is being knitted with the needle in the current position, showing the knit direction.

All Progress Windows are described in detail in Progress Windows (See page 64).

Machine knitting Screen



When viewing this manual on the computer, the cursor may be hovered over the image. Where the cursor changes to a hand it can be clicked on as a quick way of getting to the relevant section.

The **Title bar** displays information about the section of DesignaKnit that is currently used (which in this case is Interactive Knitting), as well as the name of the shape file, garment piece, stitch pattern with its method ([See page 206](#)), current tension (T:30x40) and the name of the knitting machine.

The **Hints area** shows additional information if needed, such as a description of each menu option as the cursor is hovered over it.

The screen contains 'Progress windows', displaying position and knitting progress for the current piece in different and complementary ways.

The "Countdown + Shaping Instructions" window ([See page 67](#)) displays the information pertaining to where the knitting is in the piece in a numeric format. The "Yarns" window ([See page 71](#)) displays which colors are presently used and from which feeder. The "Needle Bed" window ([See page 87](#)) displays a graphic view of part of the piece that is being worked, and the "Piece Overview" window ([See page 94](#)) at the top right of the image shows the entire piece that is being knitted with the carriage in the current position, indicating the knit direction.

All Progress Windows are described in detail in Progress Windows ([See page 64](#)).

Program sections

Clicking each of these five buttons opens the appropriate section of the program. A short description of each has been given in the Welcome ([See page 1](#)) chapter. The section that is active appears as a pink button, while the others are shown as green.



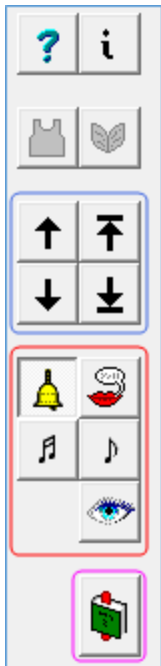
- Standard Garment Styling
- Original Pattern Drafting
- Stitch Designer
- Interactive Knitting
- DesignaKnit Graphics Studio

Menu

Shape File Stitch Pattern File View Go Options Window Help

The desired menu option can be clicked on in the image above for detailed descriptions ([See also Menus on page 12](#)).

Toolbar



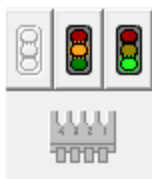
The Left Toolbar buttons are divided into several sections. The top two buttons access Help about menu and toolbar ([See page 9](#)) as well as Information about all the settings of the current Interactive Knitting session ([See on page 102](#)).

The next two buttons allow easy selecting of different shape or stitch pattern files.

The buttons that are grouped together in the blue rectangle relate to manual movements within the piece that is being knitted for hand ([See on page 41](#)) or machine knitting ([See on page 54](#)). However, using these buttons will break the existing connection with a knitting machine if one is in use.

The buttons that are grouped in the red rectangle relate to all the ways in which Alerts can be set ([See page 107](#)).

The bookmark button (see pink rectangle) allows the work to be marked at a certain place to be picked up at a later time ([See on page 42](#)).



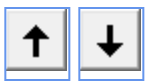
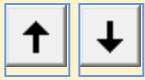
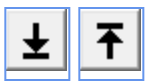
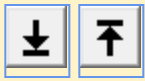
The Ready buttons ([See on page 50](#)) are shown for machine knitting with a Colour Changer icon ([See page 38](#)) below them if one is in use, as shown on the left.

Buttons and Menus

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The buttons that are available for use are clearly displayed and colored in while those that cannot be used at this time will be grayed out.

Left Toolbar

Button	Description
	Clicking the Help for this screen button opens this table with descriptions of all buttons and menus. There are various ways of getting help in the program, this being one of them. Context sensitive help is also provided by clicking the "Help" or "?" buttons in the various dialogs. Click the symbol on the left or (See page 34) for more information.
	Clicking the Settings Info button or selecting the <i>View / Info</i> menu options will display the relevant options affecting the piece that is currently displayed. The options vary according to whether this is a swatch, shape-only or integrated garment piece (See page 102).
	The Open shape file button can be clicked to access a Thumbnails view of all the shape files (*.shp). Initially the default shape folder, which can be set in Original Pattern Drafting, Standard Garment Styling and Stitch Designer, is accessed, but shape files may be found elsewhere by navigating to them (See on page 237).
	The Open Stitch Pattern File button can be clicked to access a Thumbnails view of all the stitch pattern files (*.stp). Initially the default stitch pattern folder, which can be set in Stitch Designer, is accessed, but stitch patterns may be found elsewhere by navigating to them (See on page 209).
	Hand knitting - Clicking the Next row button increases and clicking Previous row decreases the ROW number and will reposition the knitting in the "Piece Overview" window (See page 41).
	Machine knitting - Clicking the Next row button increases and clicking Previous row decreases the RC number and will reposition the knitting in the "Piece Overview" window (See page 54).
	Hand knitting - Clicking the Start of Section button moves to the start of the current section, while clicking End of Section advances to the end of the current section (See page 41).
	Machine knitting - Clicking the Start of Section button moves to the start of the current section, while clicking End of Section advances to the end of the current section (See page 54).

Button	Description
   	These options are all Audible alerts, which will sound in certain situations. Whether sounds will be heard depends on the Windows setup. If, for example, a 'no-sounds' sound scheme has been selected, or if sounds are disabled or muted in the volume mixer there will be no sound, even if this option is ticked. These settings can be found in the Windows Control panel and the sound icon in the Windows task bar (usually on the bottom right hand side of the Windows screen). The Alerts shown here can be switched on and off by clicking the buttons or by selecting or deselecting the relevant option in the <i>Options</i> menu. Either the Alerts (See page 107) chapter can be consulted, or each of the buttons shown on the left can be clicked to move directly to the relevant information.
	When this button is clicked, or the <i>Options / Highlight Alerts</i> menu option is ticked, the "Countdown + Shaping Instructions" window will be highlighted brightly and briefly whenever a row is reached that requires shaping actions. Highlighting these changes may be switched off by clicking the "Highlights" button again or unticking the menu option.
	Hand knitting - Clicking this button will set a bookmark at the current row of the knitting that is returned to on opening the same file, which is useful if the knitting has to be interrupted or if several projects are being worked on simultaneously. Setting a bookmark ensures that Interactive Knitting is always continued at the correct point (See page 42).
 	Machine knitting - The three traffic light buttons shown here are the 'Stop', 'Ready' and 'Go' buttons. At any time either 'Ready' and 'Go' (top image) or 'Stop' (bottom image) are available, depending on the connection state between the DesignaKnit computer and the knitting machine. 'Ready' and 'Go' buttons can be clicked before knitting is started or after the 'Stop' button has been clicked. When the 'Ready' and 'Go' buttons are active, the mouse wheel will be inactive in order to prevent accidentally breaking the connection between DesignaKnit and the knitting machine. The 'Stop' button can be clicked when Interactive Knitting is in progress, or after the 'Ready' or 'Go' buttons have been clicked. While the 'Stop' button is available, any screen saver that may have been configured will not activate. When the 'Stop' button is clicked it is immediately grayed out, the 'Ready' and 'Go' buttons will be available to start or resume knitting. Clicking the 'Stop' button sets a kind of bookmark in the work in the work, which will be opened and resumed at that position when it is opened next. If a screen saver has been configured, it can become active (See on page 50).
	Machine knitting - A button representing a Colour Changer, such as the one on the left, is displayed with or without a red cross to indicate its state as 'on' or 'off' (See on page 38). The Colour Changer button is absent from the Left Toolbar in Interactive Knitting when the method is Intarsia, as it does not apply to this method.

Button	Description
 	The Cable graphic or Cable abbreviation button appears on the bottom of the Left Toolbar if there is a stitch cable in the pattern or piece to be knitted. This enables quick switching from one to the other in order to gain the clearest view in all the Progress Windows.

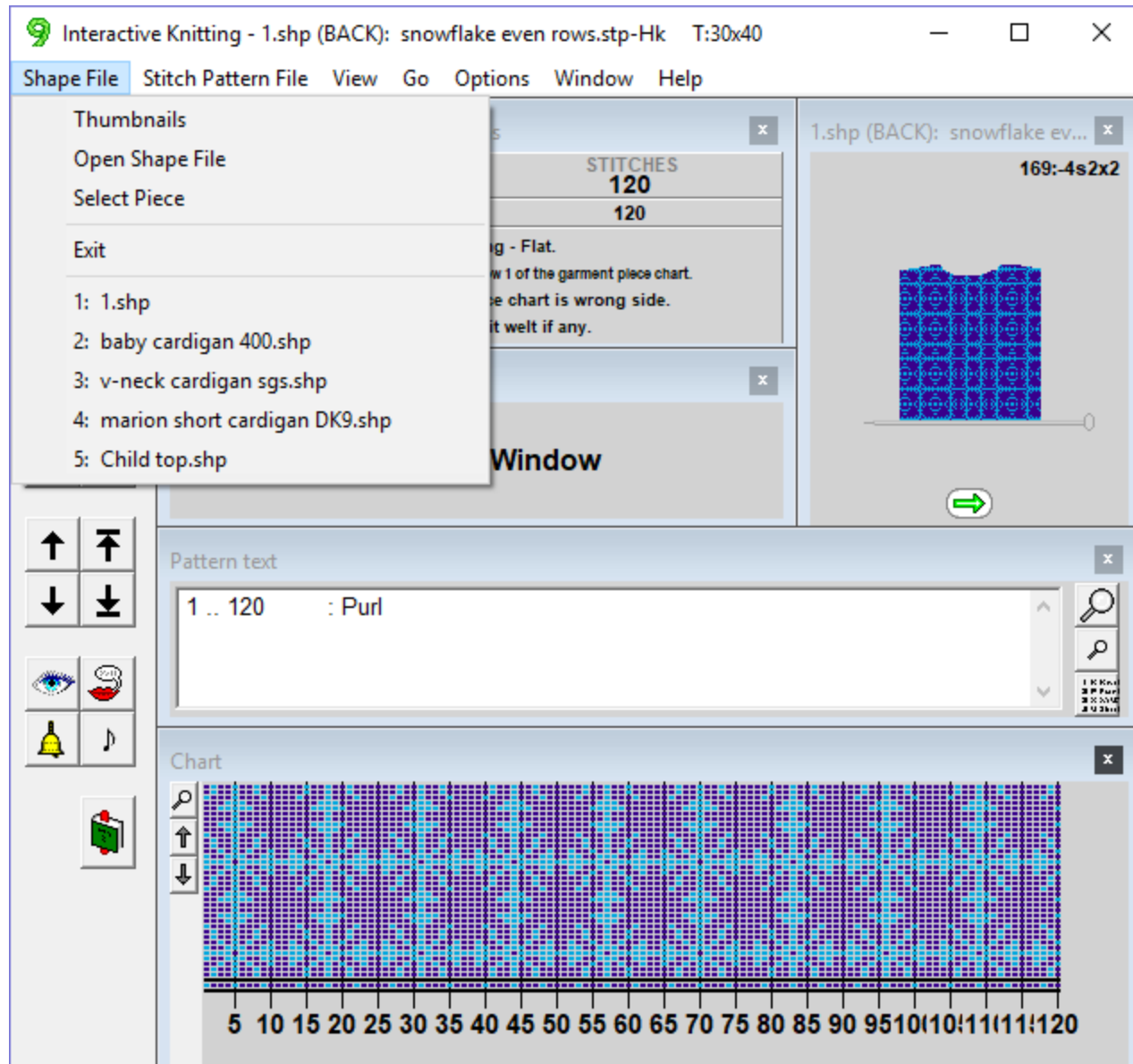
Menus

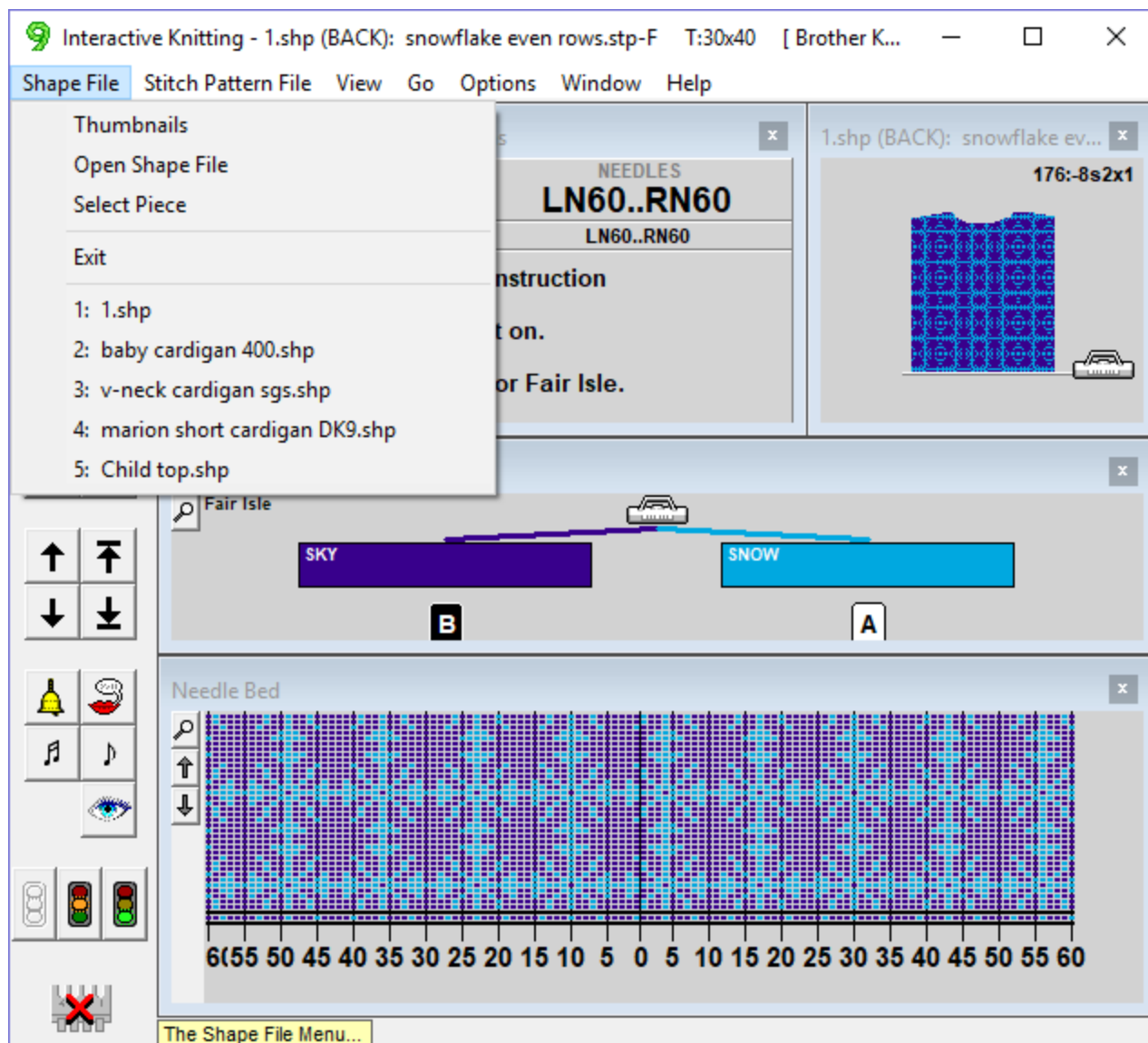
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A screenshot of each of the drop down menus is shown with the relevant options explained in a table below it. Where appropriate page references have been provided for more in depth explanations.

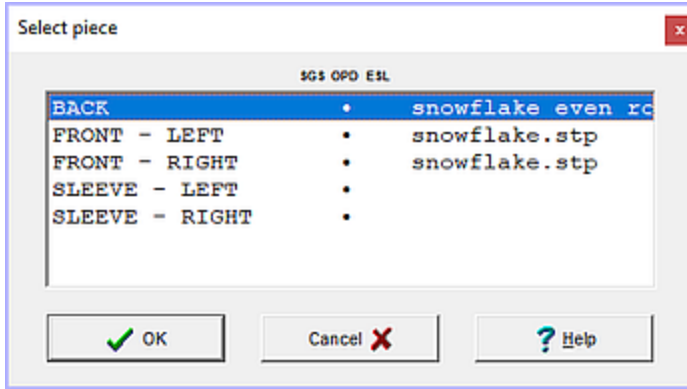
For the Complete product level, screenshots are provided for both Hand (first image) and Machine (second image) knitting. Each is easily recognized by the knitting needle or carriage slide in the top right hand side "Piece Overview" Progress window.

Shape File

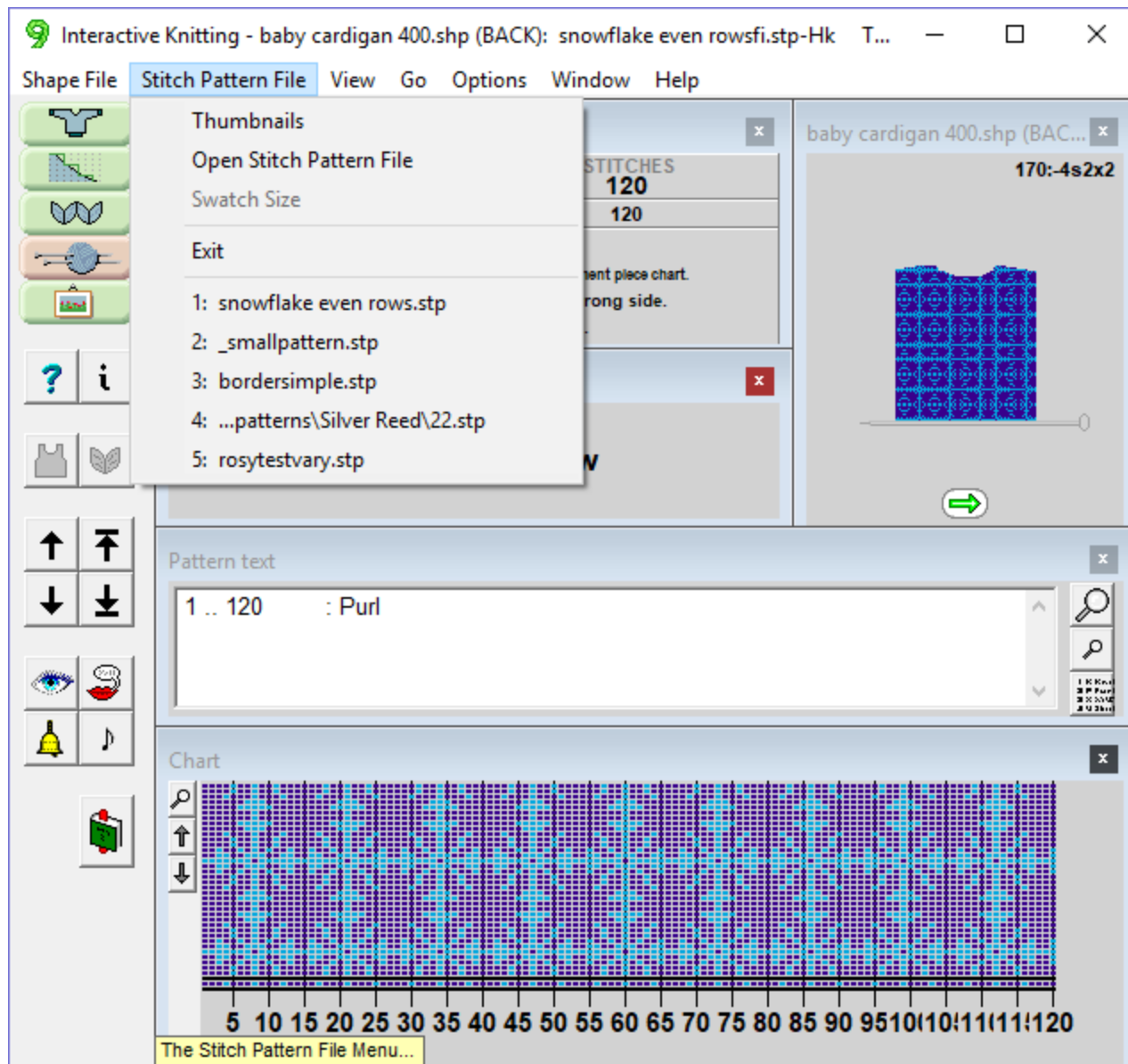


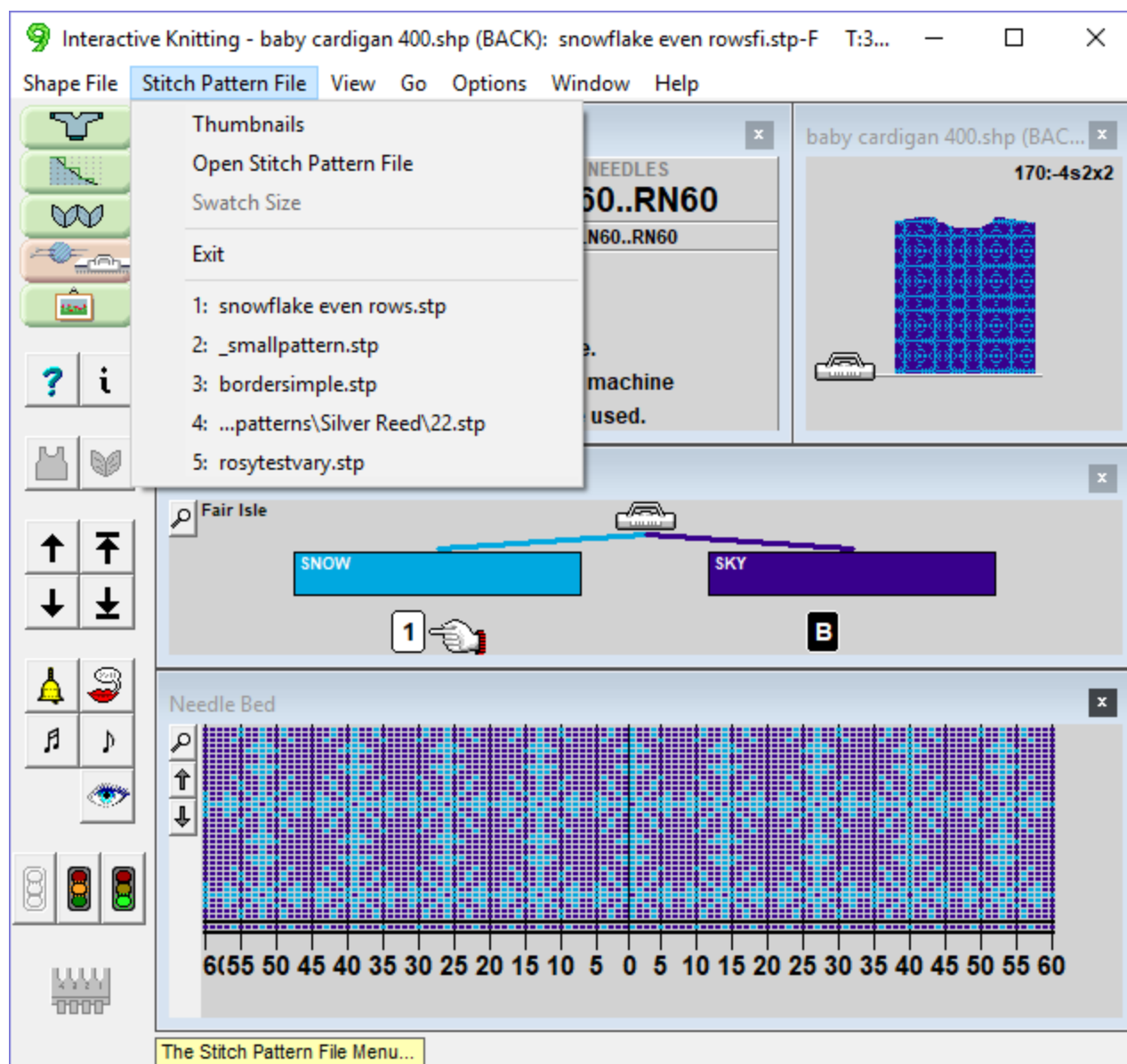


Shape File	Explanation
Thumbnails	Opens a dialog from which an existing shape file (*.shp) can be chosen. Thumbnails display information as well as small images of the file contents (See on page 237). The Thumbnails view can also be opened by clicking the "Open Shape file" button on the Left Toolbar.
Open Shape File	As well as the Thumbnails view DesignaKnit offers the possibility of opening a shape file by using a standard dialog without the detail of the thumbnails (See on page 242).

Shape File	Explanation
Select Piece	 This option allows a different garment piece to be chosen in the shape file that is currently displayed. Interactive Knitting can only work with one garment piece at a time, and each new piece needs to be selected. This menu option presents the "Select piece" dialog, from which one piece can be chosen. Each piece is marked with information regarding its origin, such as Original Pattern Drafting, as is the case in the example shown here, as well as which stitch pattern, if any, is integrated with which garment piece. If the piece was worked on with Exact Stitch Layout, it would be marked in this list. The option is grayed out unless a shape file is open.
Exit	Clicking <i>Shape File / Exit</i> will close DesignaKnit. If a position in hand knitting work has been bookmarked this will be returned to on next opening this particular shape file (See page 10). If machine knitting work has to be interrupted in the middle of a piece, DesignaKnit will pick up where it left off after the session is resumed, provided the "Stop" traffic light button is clicked, "F2" has been pressed or the <i>Go / Stop</i> menu option has been selected prior to exiting the program.
1, 2... 5	 The five most recently opened files will be displayed below the "Exit" option, with the most recent at the top. Even if files have been deleted they may still be visible in this list until sufficient other files have been opened to replace them. The files shown here are shape files only, which can be seen by the extension that is used. Provided the hand knitting "Bookmark" button (See page 10) has been clicked, or the <i>Go / Bookmark this row</i> menu option has been used, the work will be resumed at that point when this session is opened again. Provided the machine knitting "Stop" button (See page 53) has been clicked on the Left Toolbar, or the <i>Go / Stop</i> menu option has been used, the work will be resumed at that point when DesignaKnit is opened again with this session.

Stitch Pattern File

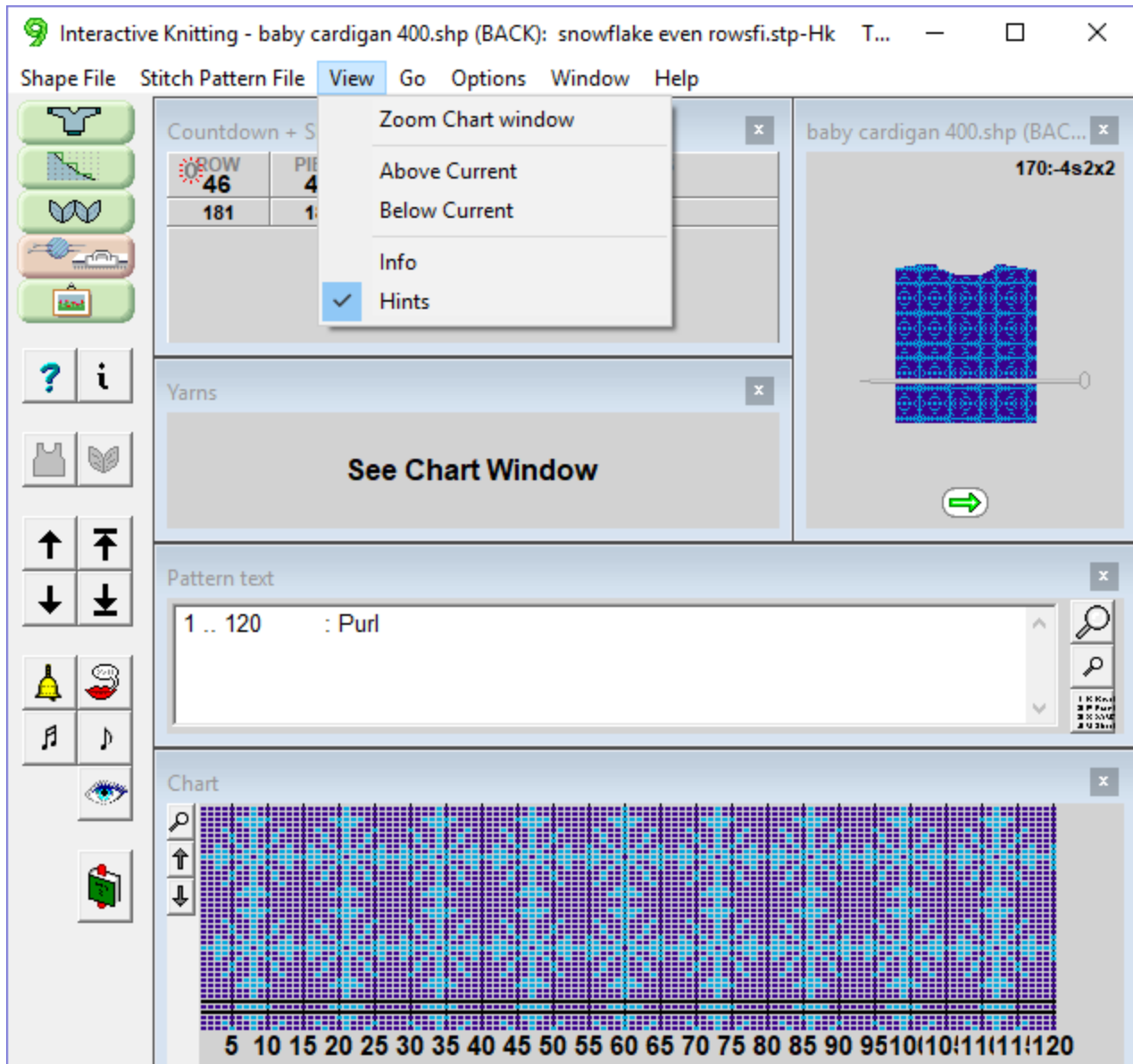


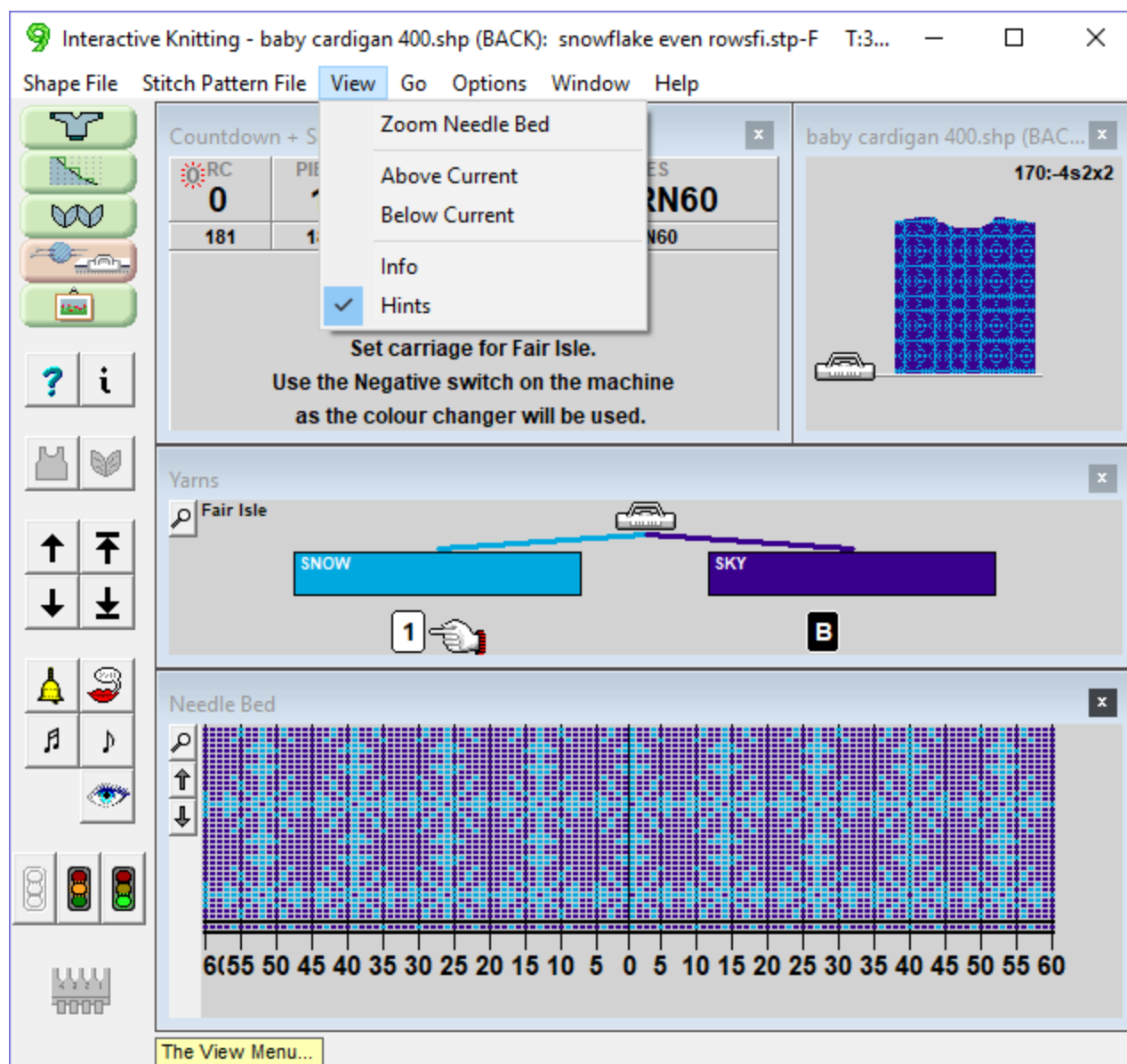


Stitch Pattern File	Explanation
Thumbnails	Opens a dialog from which an existing stitch pattern file (*.stp) can be chosen. Thumbnails display information as well as small images of the file contents (See on page 209). This view can also be opened by clicking the "Open Stitch Pattern File" button on the Left Toolbar.
Open Stitch Pattern File	As well as the Thumbnails view DesignaKnit offers the possibility of opening a stitch pattern file by using a standard dialog without the detail of the thumbnails (See on page 214).

Stitch Pattern File	Explanation
Swatch size	This option can be used to change the size of the swatch that is to be knitted at any time, to any size that fits within the restraints of the needle bed and is compliant with the chosen method of knitting. The option is grayed out unless a stitch pattern is open (See page 97).
Exit	Clicking <i>Stitch Pattern File / Exit</i> will close DesignaKnit. If a position in hand knitting work has been bookmarked (See page 10) this will be returned to on next opening this particular stitch pattern. If machine knitting work has to be interrupted in the middle of the piece, DesignaKnit will pick up where it left off after the session is resumed, provided the "Stop" traffic light button is clicked, "F2" has been pressed or the <i>Go / Stop</i> menu option has been selected prior to exiting the program.
1, 2... 5	Exit 1: snowflake even rows.stp 2: snowflake.stp 3: snowflake border.stp 4: bow pink.stp 5: cableexamplejumper.stp Underneath "Exit" the five most recently opened stitch pattern files will be displayed with the most recent at the top. Even if files have been deleted they may still be visible until sufficient other files have been opened to push them off the list. The files shown here are stitch pattern files only, which can be seen by the extension that is used. Provided the hand knitting "Bookmark" button (See page 10) has been clicked, or the <i>Go / Bookmark this row</i> menu option has been used, the work will be resumed at that point when this session is opened again. Provided the machine knitting "Stop" button (See page 53) has been clicked on the Left Toolbar, or the <i>Go / Stop</i> menu option has been used, the work will be resumed at that point when DesignaKnit is opened again with this session.

View





View	Explanation
Zoom Chart window	Hand knitting - Accessing this menu option repeatedly cycles through the different zoom levels that are possible for this window. It will generally be easier to use the Zoom button at the top left side of the actual Progress window (See page 86).
Zoom Needle Bed	Machine knitting - Accessing this menu option repeatedly cycles through the different zoom levels that are possible for this window. It will generally be easier to use the Zoom button at the top left side of the actual Progress window (See page 89).

View	Explanation
Above Current Below Current	Accessing these menu options repeatedly will move the piece in the Chart or Needle Bed window in such a way that more rows are displayed above or below the currently active (highlighted) row. This can be achieved more easily by using the 'Row Up' and 'Row Down' buttons at the top left side of the Chart (See page 85) or Needle Bed window (See page 88), below the Zoom button.
Info	This menu option will display the relevant options affecting the piece that is currently on the screen. The information varies according to whether this is a swatch, shape-only or integrated garment piece. More information can be found in View Info (See page 102).
Hints	When this option is ticked and the cursor is hovered over a button on the Left Toolbar a Hint appears near the cursor, as shown in the example on the left. When the cursor is hovered over any of the drop down menu items after a menu option is clicked along the top, the hints appear at the bottom of the screen, so they do not interfere with the view, as can be seen in the screen shot images of the menu options.

Go

Interactive Knitting - baby cardigan 400.shp (BACK): snowflake even rowsfi.stp-Hk T... — □ ×

Shape File Stitch Pattern File View **Go** Options Window Help

Countdown + Shaping

ROW	PIECE
46	47
181	181

Yarns

See Chart Window

Pattern text

1 .. 120 : Purl

Chart

5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120

Next Row
Previous Row
Start Section
End Section
Row
Bookmark this row
Resume at Bookmark

baby cardigan 400.shp (BA... X

170:-4s2x2

1 10 Knit
2 10 Purl
3 10 Knit
4 10 Purl

Interactive Knitting - baby cardigan 400.shp (BACK): snowflake even rowsfi.stp-F T:3... — □ ×

Shape File Stitch Pattern File View **Go** Options Window Help

Countdown + Shaping

RC	PIECE
36	37
181	181

Next Row
Previous Row
Start Section
End Section
Go to RC
Stop (F2)
Ready (F3)
Go (F2)
Resume from Last Stop

Yarns

Fair Isle

SNOW SKY

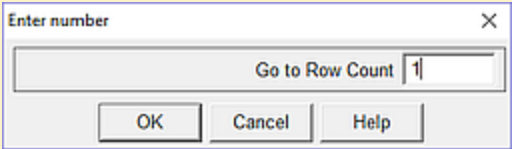
1 B

Needle Bed

6(55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60

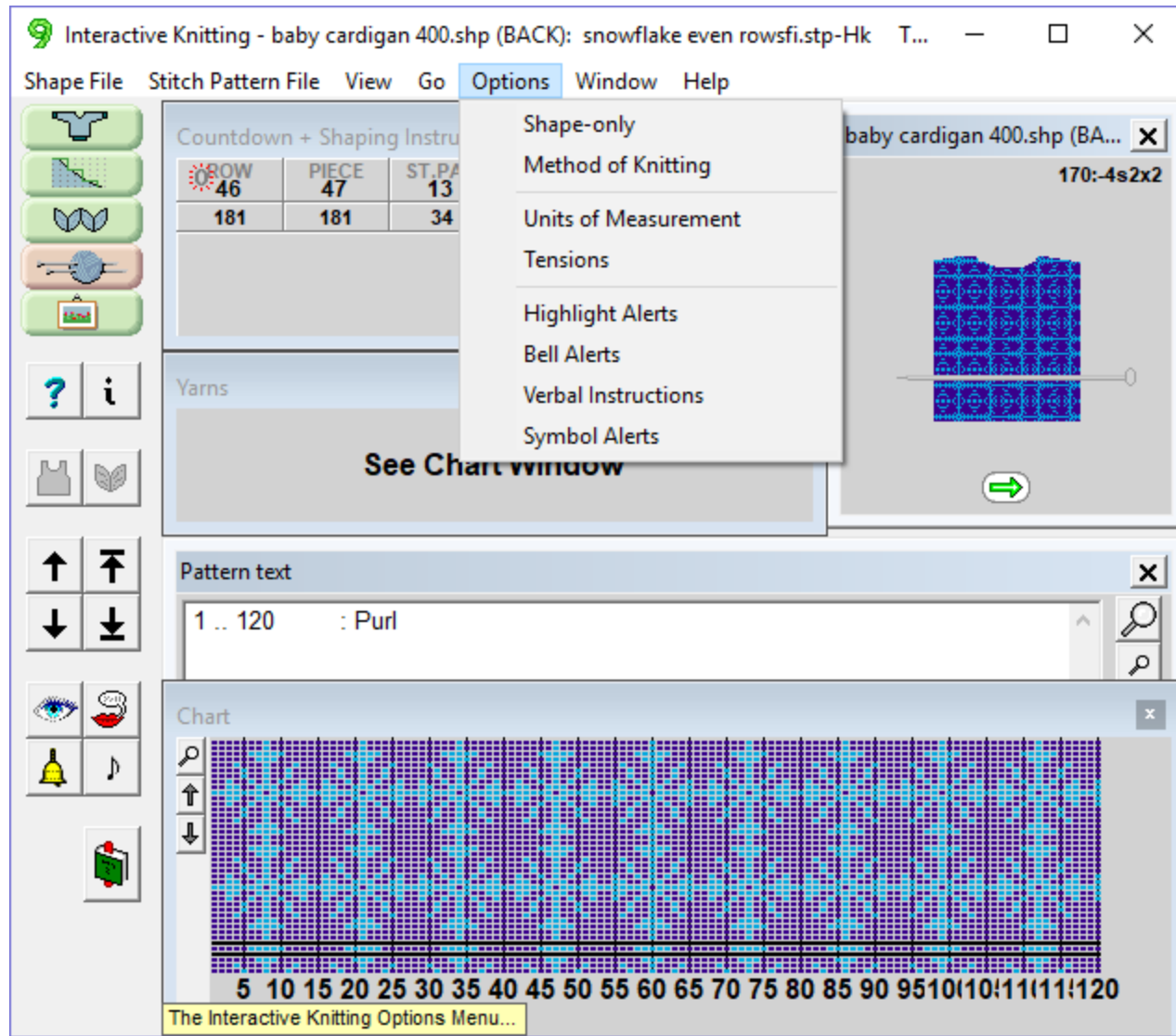
The Go Menu...

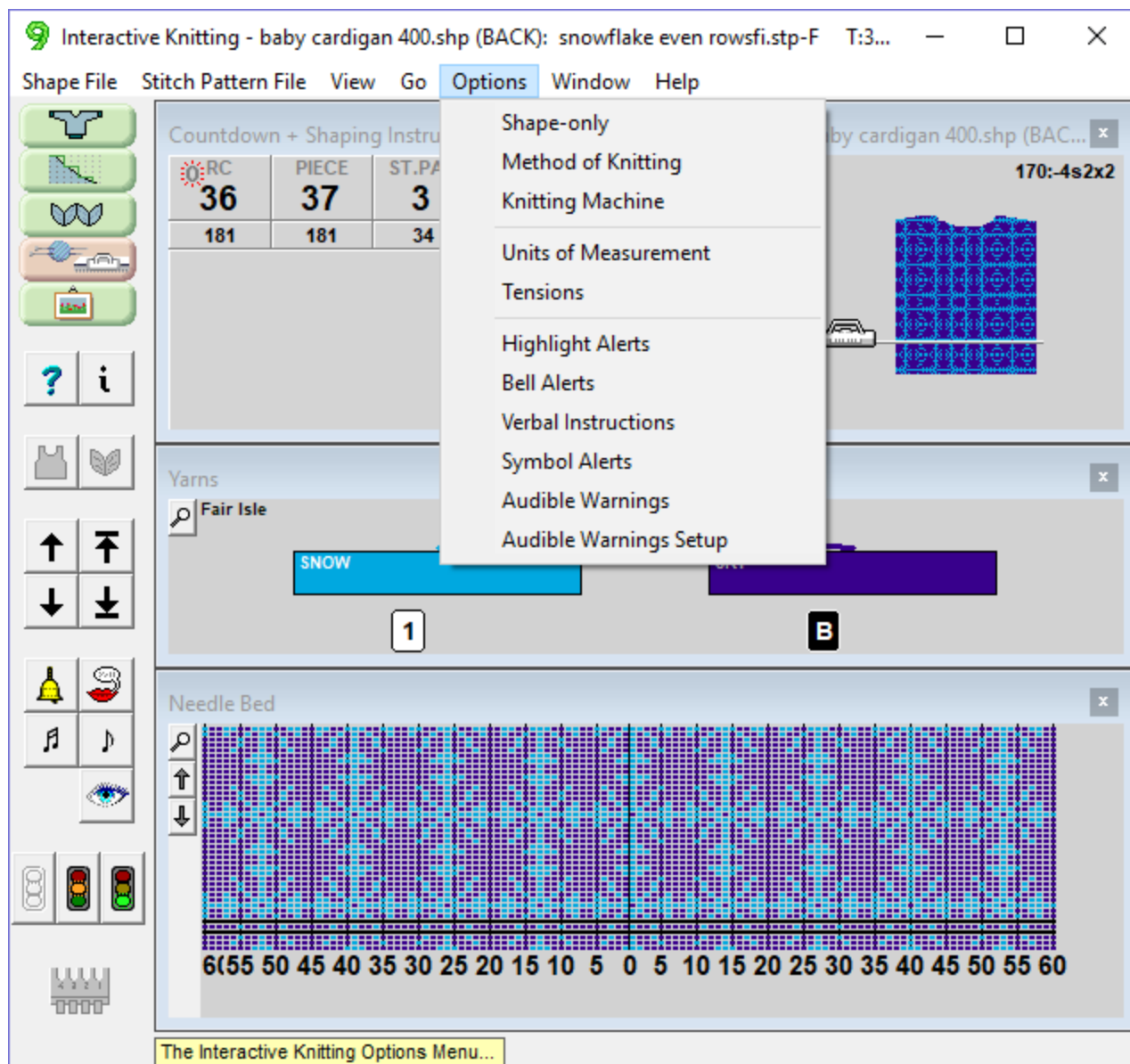
Go	Explanation
Next Row	Hand knitting - Clicking this menu option increases the ROW number and will reposition the knitting in the "Piece Overview" window (See page 41). Machine knitting - Clicking this menu option advances the knitting by one row each time it is accessed, breaking the connection between knitting machine and DesignaKnit if this was active. Alternative ways of advancing in the knitting are pressing the space bar or Up arrow key on the keyboard, or using the 'Next Row' button (See page 55) on the Left Toolbar. If the connection through the cable link was broken, it needs to be restored in order to resume knitting interactively because DesignaKnit will be in Preview (See page 54) mode. The RC in DesignaKnit and the knitting machine need to be synchronized and the 'Ready' button (See page 50) clicked before resuming knitting. The same applies for using the 'Previous Row', 'Start Section' and 'End Section' buttons or equivalent actions.
Previous Row	Hand knitting - Clicking this menu option decreases the ROW number and will reposition the knitting in the "Piece Overview" window (See page 41). Machine knitting - Clicking this menu option goes to the previous row in the knitting each time it is accessed. Alternative ways of going back in the knitting are pressing the Down arrow key on the keyboard or using the 'Previous Row' button (See page 55) on the Left Toolbar.
Start Section	Hand knitting - Clicking this menu option moves the knitting to the start of the current section. Alternatively, the 'Start of Section' button on the Left Toolbar (See page 41) can be clicked. Machine knitting - Clicking this menu option moves the knitting to the start of the current section. Alternatively, the 'Start of Section' button on the Left Toolbar (See page 54) can be clicked.
End Section	Hand knitting - Clicking this menu option moves the knitting to the end of the current section. Alternatively, the 'End of Section' button on the Left Toolbar (See page 41) can be clicked. Machine knitting - Clicking this menu option moves the knitting to the end of the current section. Alternatively, the 'End of Section' button on the Left Toolbar (See page 54) can be clicked.
Row	Accessing this menu option when knitting a Hand Knit piece will present the "Enter number" box shown on the left into which a specific Row number can be entered to jump to a specific place in the knitting.

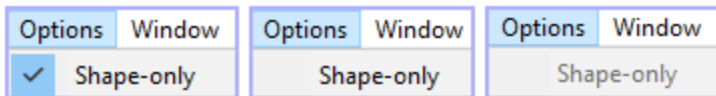
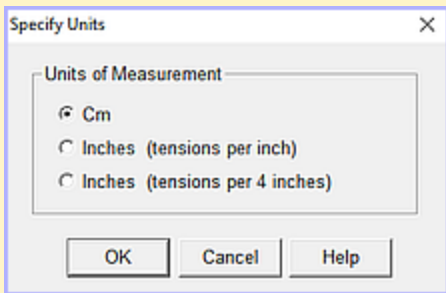
Go	Explanation
Bookmark this row	Hand knitting - This menu option is used to mark a position in the knitting when a hand knitted piece is in progress, so it can be resumed at that position if the work needs to be interrupted. A Bookmark is assigned to a swatch, shape-only or integrated garment piece and is saved with this particular configuration. For example, if an integrated garment piece is knitted and a bookmark set for this, opening the stitch pattern that was used for the integration, or opening the Shape-only for that garment piece will not contain the bookmark.
Resume at Bookmark	Hand knitting - A Bookmark (See page 42) can be used to 'fix' a position in the work, so that scrolling backwards and forwards through the rows can be done easily. <i>Go / Resume at Bookmark</i> can then be used to quickly return to the bookmarked position.
Go to RC	 This menu option can be used to go to a specific row in the work when machine knitting. The "Enter number" box will be presented into which a Row Count number can be typed. The RC number refers to a pass of the carriage and is not necessarily the same as a knitted pattern row. How many passes of the carriage are needed to knit one pattern row depends on the method of knitting. This option can be useful if work has to be unravelled, after which both the physical carriage and the DesignaKnit Progress windows need to be in the same place.
Stop	Machine knitting - Using this menu option will stop DesignaKnit from interacting with the knitting machine. This may be required if the knitting needs to be paused, rows need to be unravelled or when another section of a lengthy stitch pattern needs to be downloaded. Using this menu option, or clicking the 'Stop' button (See page 53) on the Left Toolbar ensures that the position in the work is remembered. Once all actions have been completed, knitting can be resumed after clicking the 'Ready' button and following its instructions to make sure that the knitting machine and DesignaKnit are synchronized.
Ready	Machine knitting - This menu option, or the 'Ready' button on the Left Toolbar (See page 50) are used to ensure that DesignaKnit and the physical knitting machine are properly synchronized. The option is used after the knitting has been paused, whether by using menu options, arrow keys or the 'Stop' button. The 'Ready' instructions should be followed and once "OK" has been clicked the 'Stop' button becomes available.
Go	Machine knitting - The 'Go' menu option, or 'Go' button on the Left Toolbar (See page 54) can be used to start knitting after it has been stopped or paused. Care needs to be taken to ensure that both the knitting in the DesignaKnit screen and the physical knitting machine carriage are at the same Row Count as this option will continue from where either of them is, regardless of whether this is correct. If in doubt, it is safer to use the 'Ready' button or menu option.

Go	Explanation
Resume from Last Stop	Machine knitting - It may be useful or become necessary to interrupt knitting in order to review previous steps or view steps ahead by pressing 'Esc', 'Alt', space bar or any of the arrow keys on the keyboard, as well as using the 'Stop' button. <i>Go / Resume from Last Stop</i> will return the work to where it was last stopped by any of these methods. To resume knitting, the 'Ready' button then needs to be clicked in order to receive the correct instructions to start knitting from this point.

Options

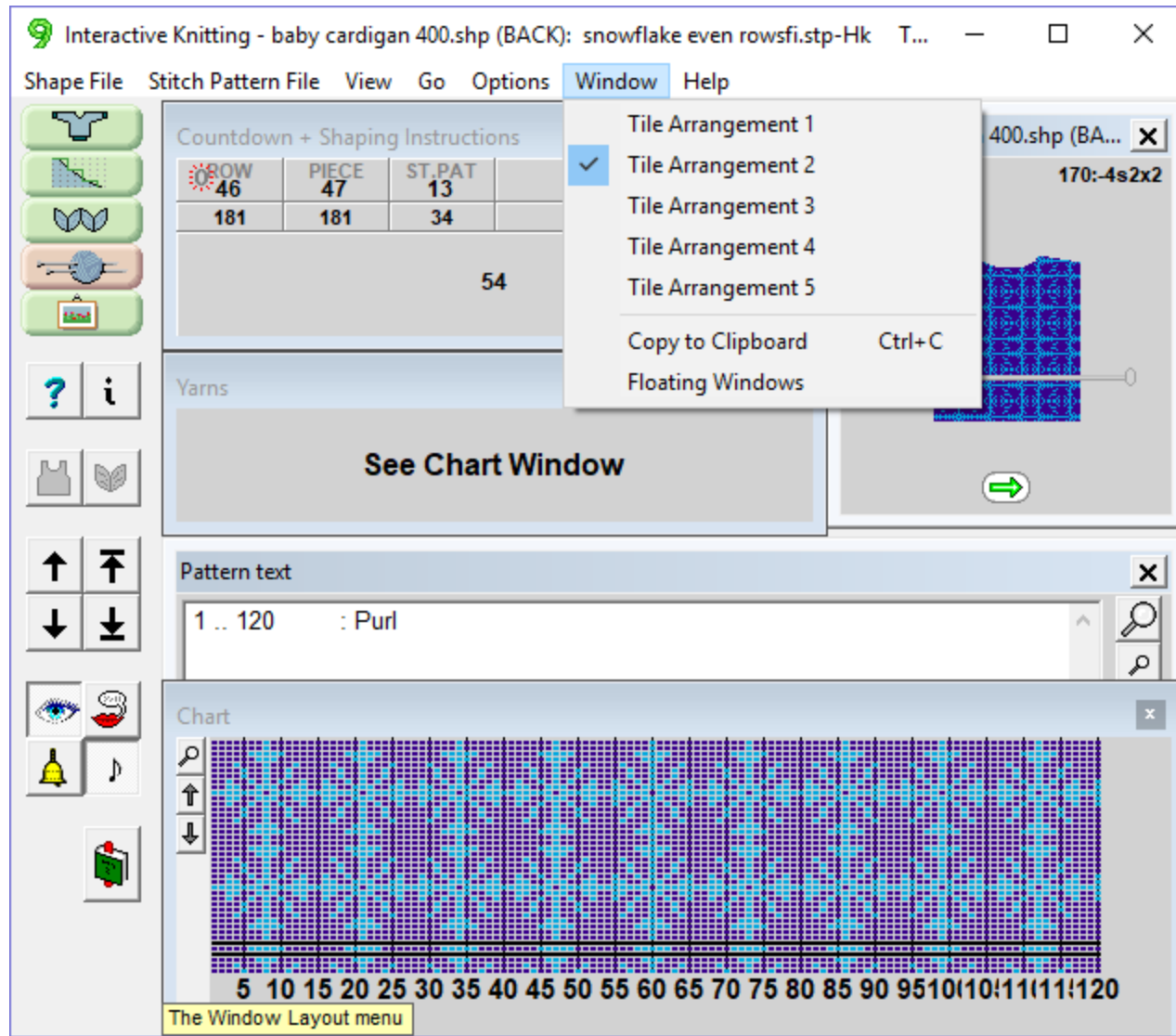


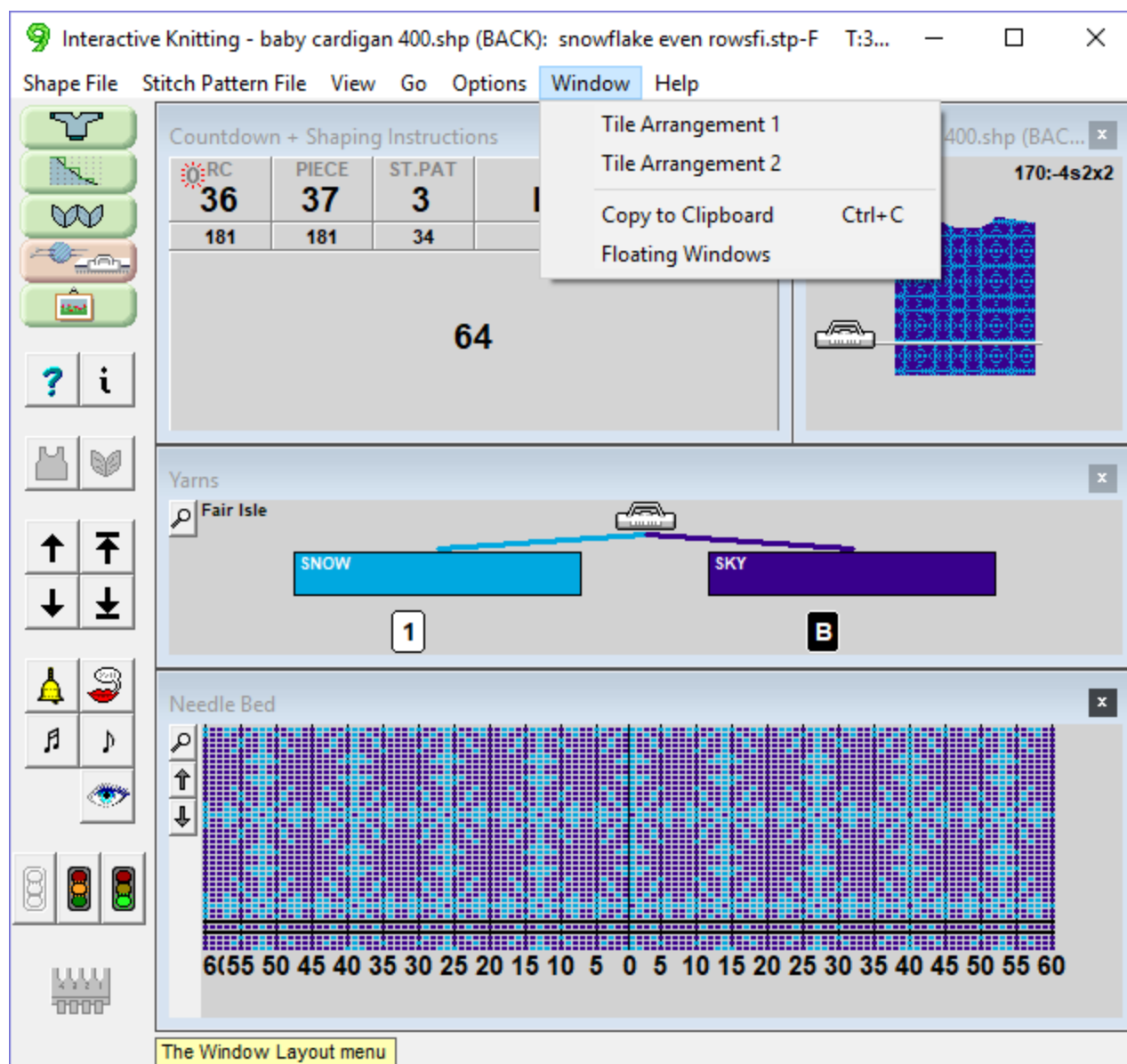


Options	Explanation
Shape-only	 This menu option is only available when a shape file is used. If 'Shape-only' is ticked it means that either there is no stitch pattern associated with this shape or that it has been temporarily hidden by this option. Unticking 'Shape-only' will reinstate the originally integrated stitch pattern or, if the shape did not contain a stitch pattern, return to the main screen while the Shape-only option will remain ticked. If a stitch pattern needs to be integrated with a shape file, this has to be done in Original Pattern Drafting or Stitch Designer, prior to entering Interactive Knitting. Ticking the 'Shape-only' option will open a different dialog (See page 100). More information can be found in Shape-only (See page 99).
Method of Knitting	Hand and Machine knitting can be switched easily in Method of Knitting. However, switching the method will apply this change immediately without deliberately saving. The only way of reverting to the previous option is to select the remembered method, preferably before exiting Interactive Knitting. As patterns are designed with a certain method in mind and will most likely be checked for errors with that method, switching the method in Interactive Knitting may not be the best option, as it will present different possible errors and other unforeseen challenges. The only way of reverting to the previous option is to select the method again. Hand knitting - a different stitch method can be selected, such as Reverse Stocking stitch, Circular knitting, Garter stitch etc. (See page 112). Machine knitting - in addition to choosing a different knitting machine, this option can be used to select a different knitting method, such as Fair Isle, Jacquard etc. (See page 119). If the garment piece that is displayed is a 'Shape-only', the "Shape Only options" dialog will be presented instead (See page 100).
Knitting Machine	This option will go directly to the selection screen where a different knitting machine can be chosen and setup (See page 118).
Units of Measurement	 This menu option opens the dialog shown on the left in which centimeters or inches may be specified as the unit to work with. The selected unit of measurement will be applied wherever it is relevant, such as in the Tension dialogs. Changing the setting anywhere in DesignaKnit will change it for all sections.

Options	Explanation
Tensions	Depending on whether a shape file or a stitch pattern file is displayed, a basic or expanded Tensions dialog will be presented (See on page 196). Changing the tension settings in Interactive Knitting has consequences for the positioning of a stitch pattern in an integrated shape file, and is best done in Stitch Designer or Original Pattern Drafting (See on page 37).
Highlight Alerts 	When this menu option is ticked, or the "Highlights" button on the Left Toolbar is clicked, the "Countdown + Shaping Instructions" and / or "Yarns" window will highlight briefly whenever a row is reached that requires shaping or yarn changing actions (See page 108). Highlighting these changes may be switched off by unticking the menu option or clicking the "Highlights" button.
Bell Alerts 	When this menu option is ticked or the "Bell" button on the Left Toolbar is clicked, a bell will sound on reaching a row where shaping actions need to be taken. Which shaping technique is required will be shown by the symbols that are displayed in the "Countdown + Shaping Instructions" Progress window as well as the "Yarns" window (See page 107). Whether sounds will be heard depends on the Windows setup. If, for example, a 'no-sounds' sound scheme has been selected, or if sounds are disabled or muted in the volume mixer there will be no sound, even if this option is ticked. These settings can be found in Windows Control panel and the sound icon in the Windows task bar (usually on the bottom right hand side of the Windows screen).
Verbal Instructions 	When this menu option is ticked or the "Verbal Instructions" button on the Left Toolbar is clicked, a voice will give basic instructions for increasing, decreasing, holding or picking up stitches. The actual technique that needs to be used is shown by the symbol that is displayed in the "Needle Bed" or "Chart" window and described in the "Pattern text" window. If no symbols were included, there will be no specific instructions from DesignaKnit, other than to increase or decrease however many stitches are shown in the "Countdown + Shaping Instructions" and "Needle Bed" or "Chart" windows (See page 107).
Symbol Alerts 	If alerts have been added to Memo symbols and / or stitch cables in Stitch Designer, this menu option can be ticked, or the "Stitch Symbol Alerts" button on the Left Toolbar clicked to hear a sound on reaching a row with that symbol or cable. If the row contains more than one symbol or cable with an associated sound, only the first one will be sounded (See page 107). The option can be switched off by unticking <i>Options / Symbol Alerts</i> or clicking the button again.
Audible Warnings 	Machine knitting - This menu option can be ticked or the "Audible Warnings" button clicked to play user defined sounds when certain actions need to take place. These warnings are independent and different from the "Bell" and "Verbal Instructions" alerts which are defined and used in Stitch Designer. Sounds can be set up in Interactive Knitting for different purposes, such as warning for starting or stopping a color, when to pick up, cast off or hold stitches, when to set a marker and many more (See page 108).
Audible Warnings Setup	Machine knitting - Different sounds and even tunes can be set up to play when "Audible Warnings" is switched on (See page 108).

Window



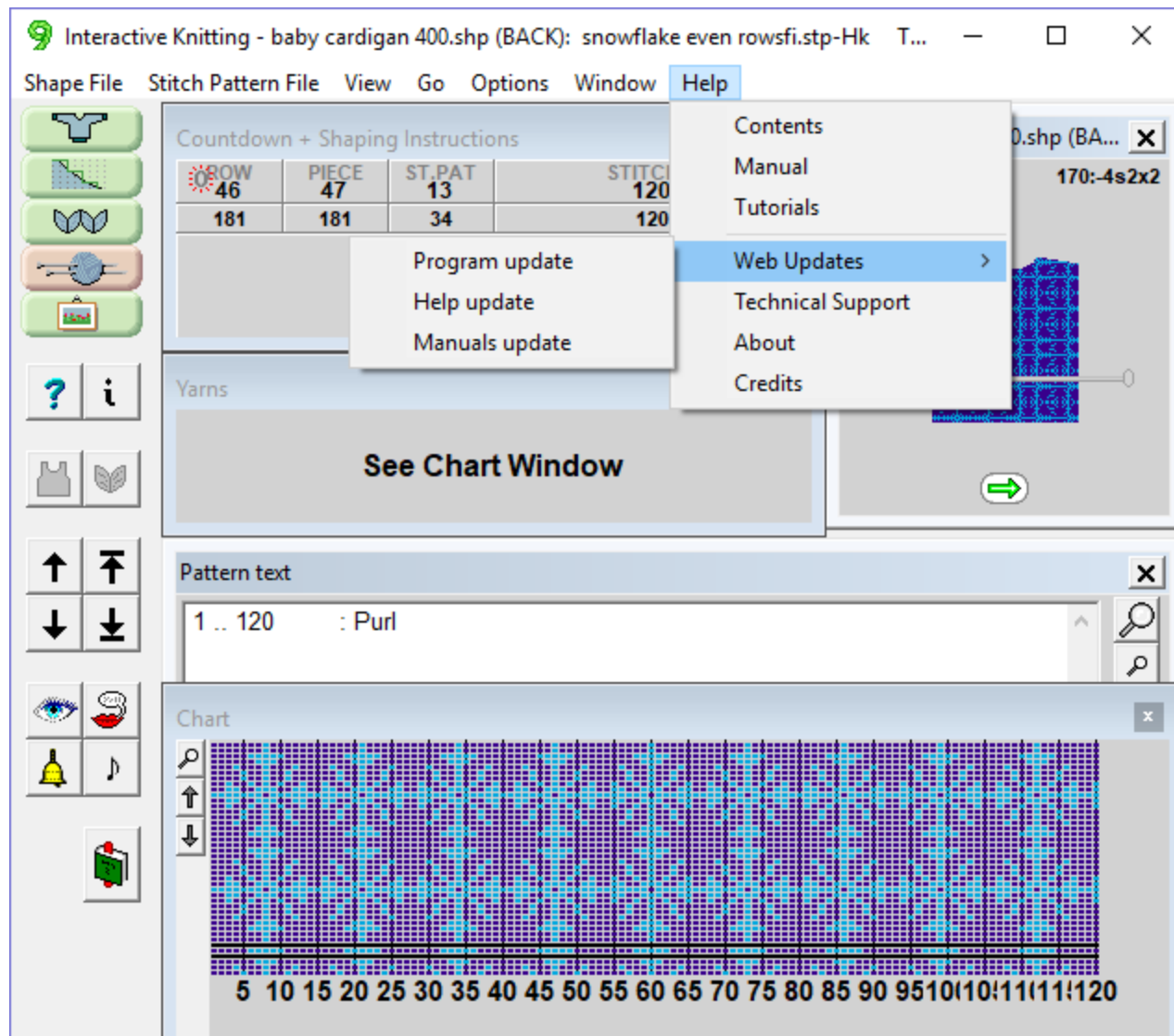


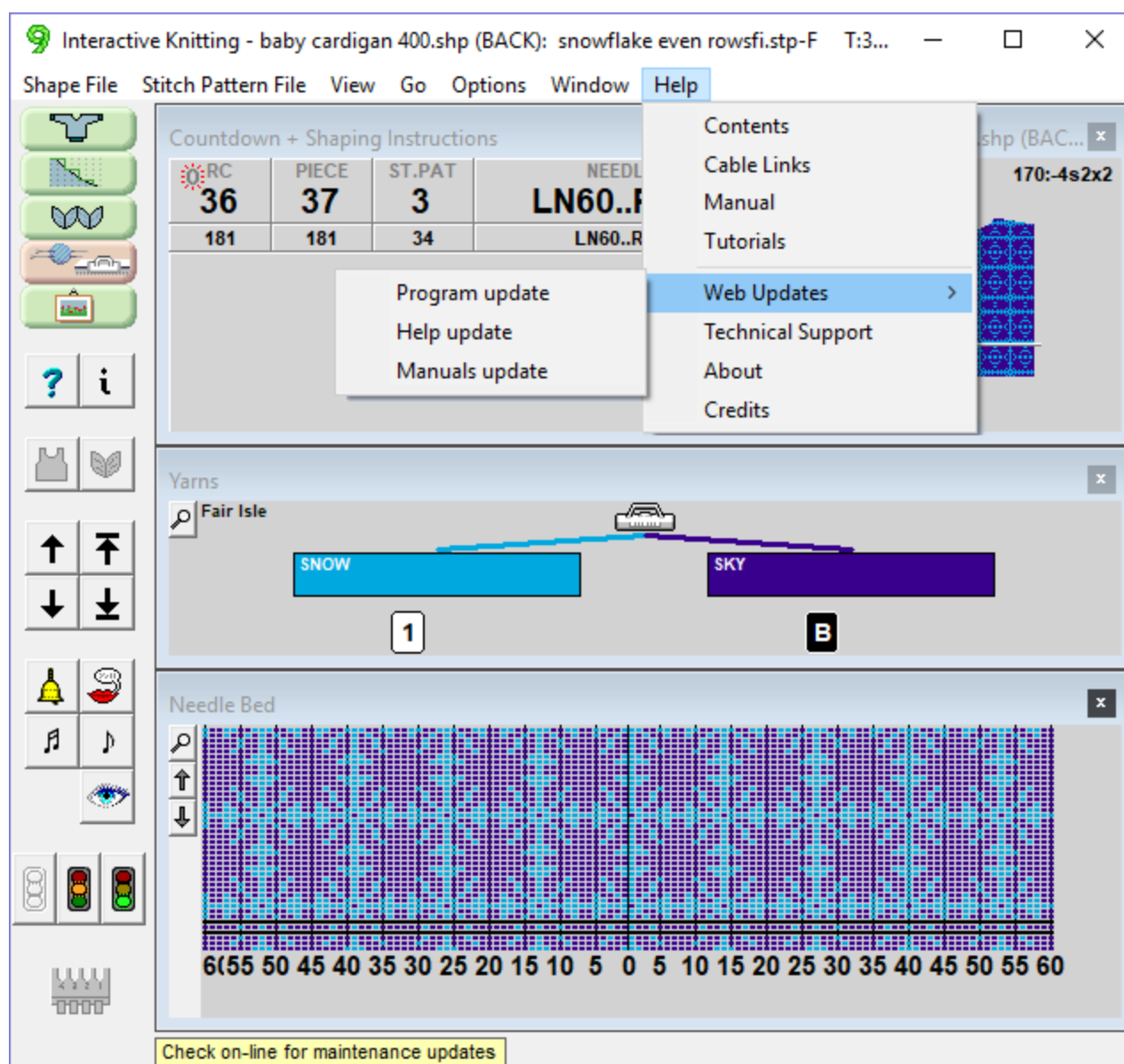
The Window Layout menu

Window	Explanation
Tile Arrange-ment 1, 2, 3, 4, 5	DesignaKnit offers up to five different preset layouts of the Progress Windows from which one can be chosen. The selected layout is remembered for future sessions of Interactive Knitting until it is changed (See page 65).
Copy to Clipboard	This menu option, or using "Ctrl-C" copies the Interactive Knitting screen, including the Left Toolbar buttons, to the Clipboard. This can be useful if this view needs to be copied to a different application for purposes of documentation, whether for publishing or own use. As the screen will be copied in its entirety, exactly as it is shown, the different Progress Windows should be arranged as required by hiding, resizing or rearranging to gain an optimal view (See on page 64).

Window	Explanation
Floating Windows	When the <i>Window / Floating Windows</i> option is ticked, any or all of the Progress windows may be moved away from the Interactive Knitting screen. Clicking the option again will restore whichever preset layout had been selected.

Help





More information on the Help Options can also be found in Accessing Help ([See page 188](#)).

Help	Explanation
Contents	Launches the Contents Help for the Interactive Knitting section of DesignaKnit. Hyperlinks, Search and Index can all be used to navigate through the help chapters easily. Information about the Contents Help file can be found in Contents (See page 190).
Cable Links	Clicking this button provides easy access to the chapter that deals with all the Cable Links that can be used with knitting machines (See on page 275).

Help	Explanation
Manual	Accesses the printable PDF manual version of the Help files. The manual can be browsed, searched and printed. More information about the PDF Help can be found in Manual (See page 192).
Tutorials	This button opens the Soft Byte Ltd website from where video tutorial files can be viewed and / or downloaded (See on page 286).
Web Updates	Program, Help and Manuals update are all available from here. For more detailed information on each of these options go to Updates (See page 194).
Technical Support	Technical support displays a dialog in which all relevant information about the program is gathered. Updates and links to national and international distributors are also here.
About	Displays version and license number as well as links to the Soft Byte Ltd website.
Credits	Contains acknowledgements to the contributors of DesignaKnit 9 (See on page 290).

Work Flow

Preparation	37
Open a file	39
Hand Knitting process	40
Machine Knitting process	46



Interactive Knitting can be started from the opening screen of DesignaKnit or by clicking the appropriate section button from within one of the other sections, after which a swatch, shape-only or integrated garment piece needs to be chosen for knitting. Some preparation and forethought is needed before starting to knit in order to make the process as smooth as possible.

Preparation

Tensions	37
Colour Changer	38
Preselection	39

Previously prepared stitch patterns and / or garment pieces are accessed one by one. Interactive Knitting instructions are downloaded to the knitting machine if a cable link is used, or followed on screen for hand knitting or without a cable link.



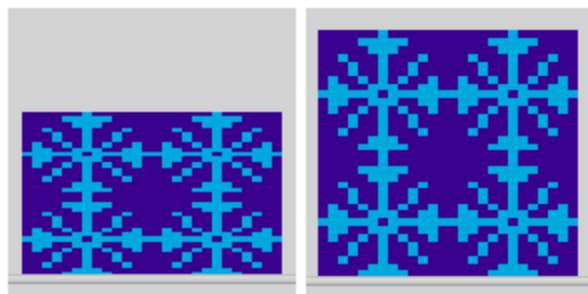
When an integrated garment piece is to be knitted, preparation and integration needs to have taken place beforehand in Stitch Designer and / or Original Pattern Drafting.

If a garment piece has not been integrated with a stitch pattern it will open as a Shape-only. Integration is explained in detail in the Stitch Designer and Original Pattern Drafting manuals, and in the Integrate ([See page 217](#)) chapter.

Tensions

Changing the tensions in *Options / Tensions* in Interactive Knitting has certain effects that need to be understood.

Garment pieces, rather than stitch patterns should dictate the tension that is used because they are designed to be a certain size and proportional shape. Stitch patterns are designed to fit in with garment pieces and should therefore take on the tension of the garment piece in which they are used.



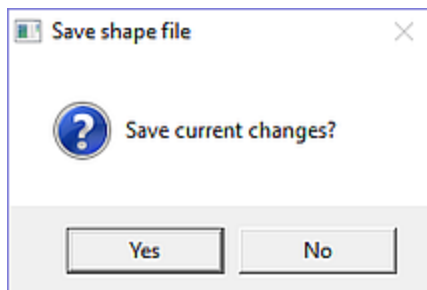
When a stitch pattern is accessed in Interactive Knitting and its tension changed through *Options / Tensions* its appearance in the "Piece Overview" and "Needle Bed" or "Chart" windows may change to reflect a different outcome of knitting, as can be seen on the left.

Nothing else is affected and the stitch pattern will knit with the number of rows and stitches as entered. However, when Stitch Designer is subsequently opened the newly applied

tension will be the Stitch Designer tension. This tension setting is independent of the tension of the shape file (garment piece). Stitch patterns in themselves do not have a tension, as they could be applied to numerous garments.

The option to change the tension of a stitch pattern in Interactive Knitting can be useful to test different size and proportion outcomes in tension swatches before committing to a particular setting. If a different tension is decided on, it is best to apply it to the shape file in Original Pattern Drafting, Standard Garment Styling or Stitch Designer as appropriate.

It is important to realise that the tension in DesignaKnit has to match the physical tension that is achieved by the actual needle size or knitting machine tension that is used, to create the desired effects.



When a shape file (garment piece) is accessed and its tension changed in *Options / Tensions*, Interactive Knitting presents the dialog shown on the left. Clicking "Yes" changes the tensions for the shape file. As this has an effect on the garment and the positioning of its integrated stitch pattern it is best to take this action from Stitch Designer or Original Pattern Drafting in which stitch pattern and garment piece can be positioned correctly in relation to each other.

If "No" is clicked the tensions still stay as changed, even when switching to a different piece in the same shape file, until either a different shape file is opened, or a different section of DesignaKnit is switched to.

If Exact Stitch Layout has been applied to any of the garment pieces in the shape file, a warning dialog will appear, offering to keep the Exact Stitch Layout status or revert to before Exact Stitch Layout ([See page 200](#)). Either of these options will affect all the pieces in the shape file and the outcome of knitting. It is strongly recommended to make the tension changes in Original Pattern Drafting or Stitch Designer instead and, if necessary, integrate stitch pattern and garment piece anew.

Although it is possible to change the tensions of garment pieces in Interactive Knitting it is not recommended as the positioning of any stitch patterns will be affected, but cannot be controlled from this section.

More general information about Tensions can be found in Tensions ([See page 196](#)), including information about the different settings of Passap knitting machines ([See on page 201](#)).

Colour Changer



The Colour Changer icons on the left represent Brother (on / off), Silver Reed (on / off) and Passap (on / off) successively. The Changer can be toggled on and off by clicking on the button in the Left Toolbar. Doing this will reset the screen so that knitting starts at the beginning of the piece, regardless of this being a swatch, shape-only or integrated garment piece. Any actions that need to be taken, such as setting the Negative switch on a Brother knitting machine, will be displayed in the "Countdown + Shaping Instructions" window. The view of the "Yarns" window will be updated as needed.

Clicking the Colour Changer button will return the screen to the starting position at row 1, with the carriage at the right or left hand side, according to the setting of the Colour Changer, the method of knitting and the state of the CAL / CAR setting of the knitting machine setup.

For rows that are Fair Isle, the needle selection will be reversed from their current state when the Colour Changer state is changed. For Jacquard, the way in which the colors are changed may be affected, which might result in difficult changes or errors in the color sequence. It is recommended to make the decision of using the Colour Changer at the Stitch Designer stage where yarns can be assigned to Feeders and certain colors suppressed in the *View / Yarn Numbers & Feeders* menu option. When the method is Intarsia, the Colour Changer button will be absent as it is not applicable to this method.

The Colour Changer settings have been described in more detail in the Colour Changer ([See page 268](#)) chapter.

Preselection

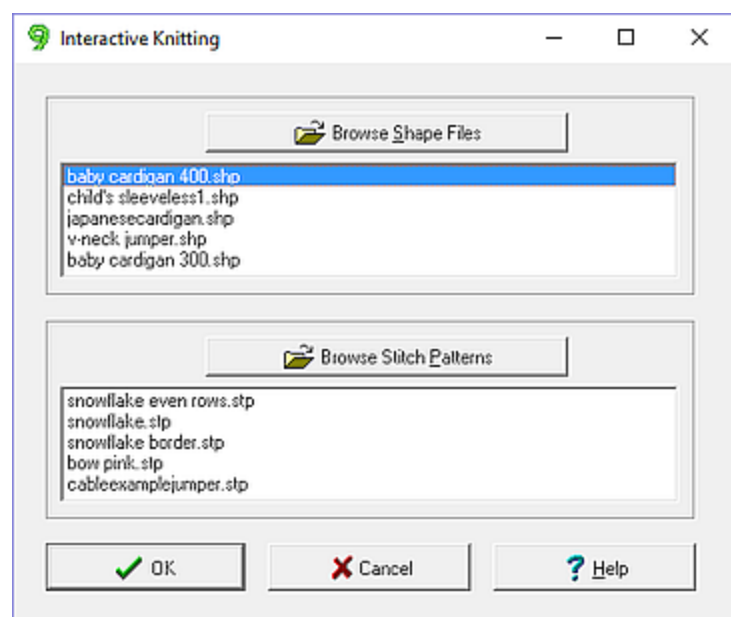
If a knitting machine uses preselection it means that the needles that are to be worked are pulled forward in the previous pass of the carriage, rather than selecting needles and knitting taking place at the same time.

Brother knitting machines preselect needles, except when using the Garter Carriage. Each pass of the carriage knits the pattern that was defined by the previous pass, and selects needles for the following pass. When starting to work the first preselect row for a new stitch pattern, and the carriage is moved for the first time with the KC setting, it is necessary to move it past the further turn mark in order for the machine to start selecting needles and to start incrementing the electronic row count on the machine. This is not necessary for subsequent carriage passes.

Brother and Toyota machines work one preselect row using the main yarn only, the Silver Reed AG50 works one preselect row and the Passap E6000 works the standard SX/GX set-up rows with no yarn in the lock. Where technique 179 is selected for the E6000 machine, an extra preselection row is included. This is knitted after the SX/GX rows have been worked in accordance with the console instructions and adds one lock pass with main yarn in the feeder, leaving the locks in place to start the pattern as separated by this technique.

Open a file

The Interactive Knitting process can be started by opening a swatch, shape-only or integrated garment piece ([See on page 96](#)).



Whenever Interactive Knitting is started a stitch pattern or shape file has to be selected anew from the opening screen that is shown on the left.

The five most recent shape files and stitch patterns are shown. Clicking "OK" will open the highlighted file, which is either a shape file or stitch pattern, depending on which of the two was most recently saved.

Different files can be browsed to from this screen by clicking one of the "Browse" buttons which will present the "Open shape file" or "Open Stitch Pattern" dialog as appropriate.

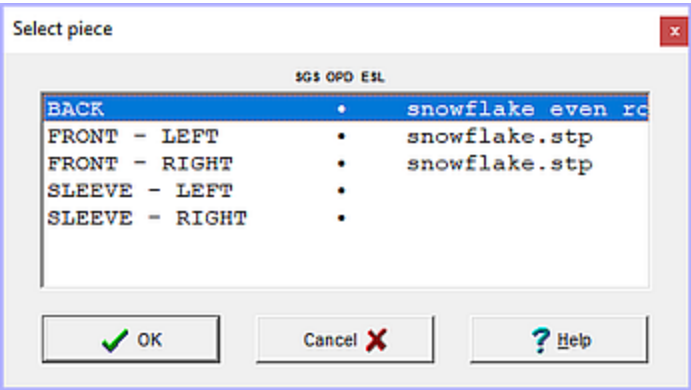
If a stitch pattern is selected, Interactive Knitting will presume a swatch is needed and presents a "Swatch dimensions" dialog in which the required size can be typed ([See page 97](#)).

If a shape file is selected, a further dialog is presented if the selected garment piece has been integrated with a stitch pattern. In that case the selection can be made to knit integrated with the stitch pattern (See on page 101), or as a Shape-only (See on page 99). If a stitch pattern has not been integrated, this option is not presented and the garment piece is displayed as a Shape-only.

If the "Interactive Knitting" dialog is cancelled or if the "Esc" key is pressed, the main screen is emptied. The dialog is presented again as soon as the mouse is clicked anywhere within the blank space.



Clicking either of the "Browse" buttons in the "Interactive Knitting" screen or one of the Left Toolbar buttons shown on the left, or selecting *Shape File / Thumbnails* or *Stitch Pattern File / Thumbnails* will present the relevant Thumbnails dialog with Search and Sort options to facilitate finding the required files. The "Search" and "Sort" options in the Thumbnails dialogs pertain to either shape files (See on page 240), (See on page 241) or stitch pattern files (See on page 212), (See on page 212), depending on which option has been chosen.



For a Shape-only or Integrated garment piece, the "Select piece" dialog is presented from which the relevant piece needs to be selected.

For pieces that were designed or modified in Original Pattern Drafting, the piece that is initially highlighted is the one that was the active piece when the file was last saved.

If a stitch pattern is integrated with the shape file, further options are presented (See page 99), otherwise the Shape-only is displayed.

If a swatch is needed, a stitch pattern needs to be chosen (See on page 96). After entering the swatch size, providing it falls within the range of possibilities of method of knitting and knitting machine, it is placed on the Interactive Knitting screen and knitting can start.

If a garment piece is required, a shape file has to be chosen and a selection box will be presented from which one piece needs to be chosen.

- If the garment piece does not contain a stitch pattern and / or is to be knitted in one color only and without stitch texture, "Shape-only" can be selected, which will place the garment piece on the screen without a stitch pattern but with all shaping instructions (See on page 99).
- If the garment piece is integrated with a stitch pattern, the "Integrated with stitch pattern" option can be ticked which will display the garment piece with the stitch pattern that has been integrated as well as any shaping instructions (See on page 101).



Stitch patterns and garment pieces need to be integrated prior to using Interactive Knitting.

Hand Knitting process

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As working with the correct tensions is crucial for the knitted result to be as designed and expected, it is highly recommended to knit a tension swatch ([See on page 203](#)) before knitting garment pieces!

When a swatch, shape-only or integrated garment piece is on the screen, the knitting instructions can be followed on the screen which provides a clear view of the current position in the piece and of the current row with all colors, stitch symbols and Pattern text instructions. On completing each row of knitting, the Interactive Knitting pattern has to be advanced one row by using the space bar, keyboard Up arrow or clicking the Next Row button on the Left Toolbar to keep the screen updated with the actual knitting.

Moving through the pattern



Clicking the **Next row** button increases the ROW number and progresses the knitting in the "Piece Overview" window. The *Go / Next Row* menu option as well as Up arrow or space bar may be used to the same effect.



Clicking the **Previous row** button decreases the ROW number and repositions the knitting in the "Piece Overview" window to an earlier stage. Alternatively, The *Go / Previous Row* menu option as well as Down arrow on the keyboard may be used.

Keyboard - The space bar and arrow keys on the keyboard can also be used to move through the pattern. Pressing the Up arrow key or the space bar moves up one row, while pressing Down arrow moves down one row. If larger jumps are needed, the "Shift" key can be held while using the Up and Down arrow keys to jump in increments of 5 rows, or the "Ctrl" key to jump in increments of 20 rows. The same can be done for the space bar, although this will only move upwards in the work.

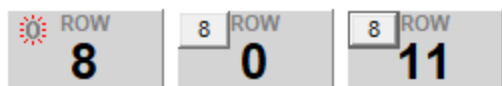
Mouse - If the mouse has a wheel this can be used to scroll up and down through the pattern.



Clicking the **Start of Section** button moves to the start of the current section. Alternatively, the *Go / Start Section* menu option may be used. If a swatch is knitted, this will be the beginning of the work, on ROW "0". If a shape or integrated garment piece is knitted where the work divides into sections, such as either side of a neck opening, this button will jump to the start of whichever section is worked on. The current section is always displayed clearly, while inactive sections will be slightly faded. To move between sections, the "Start of section" button can be used, followed by "Previous row" or down arrow to move into the previous section. This will work on any except the first section.



Clicking the **End of Section** button advances to the end of the current section. Alternatively, the *Go / End Section* menu option may be used. If a swatch is knitted, this will be the last row of the work. If a shape or integrated garment piece with more than one section is knitted the "End of Section" will be the last row before the work moves on to the next section. To move between sections, the "End of section" button can be used, followed by "Next row", Up arrow or space bar to move into the next section. This will work on any except the last section.



It can be useful to move up and down the pattern on the screen to see what is ahead or has been done. To avoid losing the current position the little row counter button ([See page 66](#)) in the "Count-down + Shaping Instructions" window may be used to 'set' the

counter at the current position. This places the current row number in this button and resets the main ROW counter to "0". The pattern can be scrolled at will by using arrow keys or mouse wheel. Returning to the initial row is simply a matter of moving through the pattern until the ROW count reads "0", then clicking the temporary row counter so this number is transferred. In this example, the knitting is at row 8 when the button is clicked, which transfers "8" to the temporary row counter and resets ROW to "0". Subsequently scrolling through the pattern changes the value in ROW while leaving "8" in place. When the situation is returned to the middle image, the temporary row counter button can be clicked and the situation is as it was. Alternatively, the position can be Bookmarked ([See page 42](#)).

The "Pattern text" window provides written instructions for the current pattern row.

There are certain things to keep in mind:

Changing the Method of Knitting in Interactive Knitting will have consequences for the knitted piece, and is best done in Stitch Designer where the result can be viewed, checked and amended if necessary. A few examples of changing the method and their consequences have been given:

- If a piece is Flat Stocking stitch and the method is changed to Reverse Stocking, the starting row will change from Knit to Purl, so that Purl stitches will show on the right (outside, effect) side of the garment piece. Knit and Purl rows will then alternate.
- If a piece is Flat Garter stitch (Knit) and the method is changed to Garter stitch (Purl), the starting row will change from Knit to Purl, with all subsequent rows being the same.
- If the stitch pattern contains stitch cables, changing the method by ticking the "Row 1 is wrong side" option ([See page 114](#)) will result in the starting row changing from Knit to Purl (or vice versa) but the stitch cable instructions stay the same. So if the background stitch was Knit and the stitch cable instruction reads something like "Slip next 2 stitches onto cable needle, hold at front, K2, then K2 from cable needle", changing the method so that Row 1 is on the wrong side will result in the background stitch being Purl, while the stitch cable will still have the Knit stitch instruction.
- If the stitch pattern contains stitch symbols, changing the method will result in the unexpected stitch symbols ([See page 114](#)) being displayed and not in changing the starting row between Knit and Purl. This can make the "Chart" and "Piece Overview" Progress windows very busy.

Although it is easy enough to change the Method of knitting, there is no revert or Undo option. If the change was not as desired, the method has to be changed to what it was from memory.

Bookmark



Clicking this button on the Left Toolbar or using the *Go / Bookmark this row* menu option will set a bookmark at the current row, which is useful if the work needs to be interrupted to switch to another garment piece, a different shape file, stitch pattern, a different project or if DesignaKnit has to be closed. The bookmark ensures that this position is returned to on opening this particular piece in this particular form. If the bookmark was set for a garment piece with an integrated stitch pattern and the garment piece is later opened as a Shape-only piece, the bookmark will be absent, and vice versa as it is kept with the original configuration.

When a bookmark is set, the *Go / Resume at Bookmark* menu option becomes available and the piece will open on the bookmarked row instead of on Row "0". A separate bookmark can be set for each Shape-only garment piece, Integrated piece and Swatch, with a maximum of 20 bookmarked files in total. Thereafter, setting each new bookmark will clear one of the others on the basis of first set, first cleared.

A Bookmark can be used to 'fix' a position in the work, so that scrolling backwards and forwards through the rows can be done easily, using the *Go / Resume at Bookmark* menu option to quickly return there.

Warnings

If more than one repeat of a stitch pattern is used, whether on its own as a swatch or as part of an integrated garment piece, it must have an even number of rows. If the stitch pattern has an odd number of rows, row 1 would be on one side of the work in the first repeat and on the other side in the second repeat, causing DesignaKnit to present an error. All odd numbered rows must be on the same side of the work and all even numbered rows on the other side for the stitch pattern to work as expected.



Interactive Knitting can't be done for a hand knit pattern having an odd number of rows and requiring more than one vertical repeat. One way to convert the pattern to even rows is to use Stitch Designer's option to Redefine as two vertical repeats.

The pattern can be adjusted in Stitch Designer by adding or deleting one row, or placing two pattern repeats on the workspace and redefining them as one stitch pattern. More information can be found in the Stitch Designer manual in the Design Tools chapter.

If a stitch pattern, whether used on its own or in an integrated garment piece, contains stitch symbols that do not have an abbreviation, such as No-Stitch, (machine) Tuck etc., a warning such as the one shown on the right will be presented. These symbols will not show up in the "Pattern text" instructions, which has consequences for the stitch count in the row in which they are used ([See page 84](#)).



This pattern has a hand knit method, but on row 6 it contains a stitch symbol that has no abbreviation for hand knitting instructions.

In the Garment Text & Pattern Text printouts, and in the hand knitting instructions in Interactive Knitting, those stitches will be represented as the main background stitch.

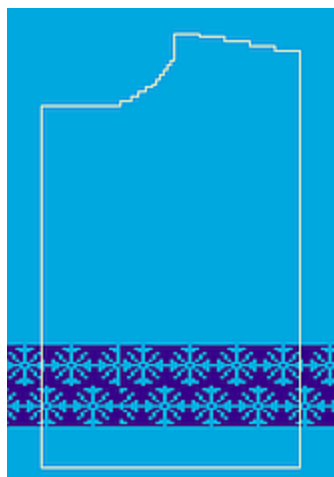
If such a stitch pattern is opened, Interactive Knitting will display a warning, but will continue to display the pattern on the screen. If an integrated garment piece is opened, containing such a stitch pattern, there is no warning, but neither will the symbols be taken into account in the "Pattern text" instructions, although they will be displayed in the "Chart" window.

Unless stitches really are meant to be excluded from the count, such as No-Stitch or symbols that represent multi stitch procedures, it is best to use symbols with abbreviations. Detailed information about the stitch symbols can be found in the Stitch Designer manual in the "KnitWrite[©]" chapter.

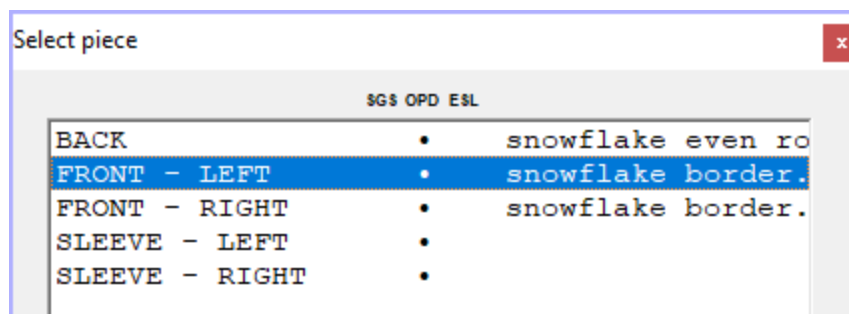
Example

The Interactive Knitting process has been shown in logical steps in order to provide a demonstration from start to finish. An integrated garment piece ([See page 101](#)) was chosen as this provides the most detail. Both a Swatch ([See page 96](#)) and Shape-only ([See page 99](#)) are simpler versions of the same process. With a swatch, a stitch pattern is chosen and a size stipulated, while in a Shape-only there is no yarn information to take into account.

A front piece of a baby cardigan, integrated with a stitch pattern is used. The garment piece is shown as it appears on the Stitch Designer workspace after integration ([See on page 217](#)).



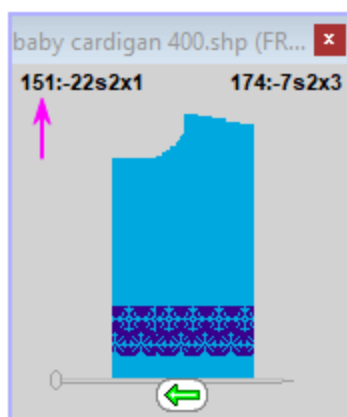
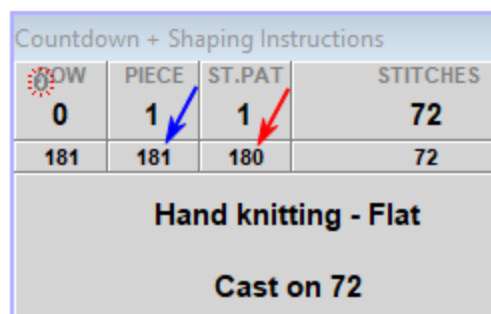
A file is opened ([See on page 39](#)) and the "FRONT - LEFT" piece chosen from the "Select piece" dialog.



After opening the file and selecting the "FRONT - LEFT" garment piece, the next box (as shown on the left) appears.

Selecting "Integrated with stitch pattern" and clicking "OK" will place this garment piece on the Interactive Knitting screen. The "Knit as one section" option is grayed out because there is only one section to knit ([See page 102](#)).

If there are any incompatibilities in knitting the chosen garment piece with the selected stitch pattern, descriptive warning messages ([See on the previous page](#)) will appear.



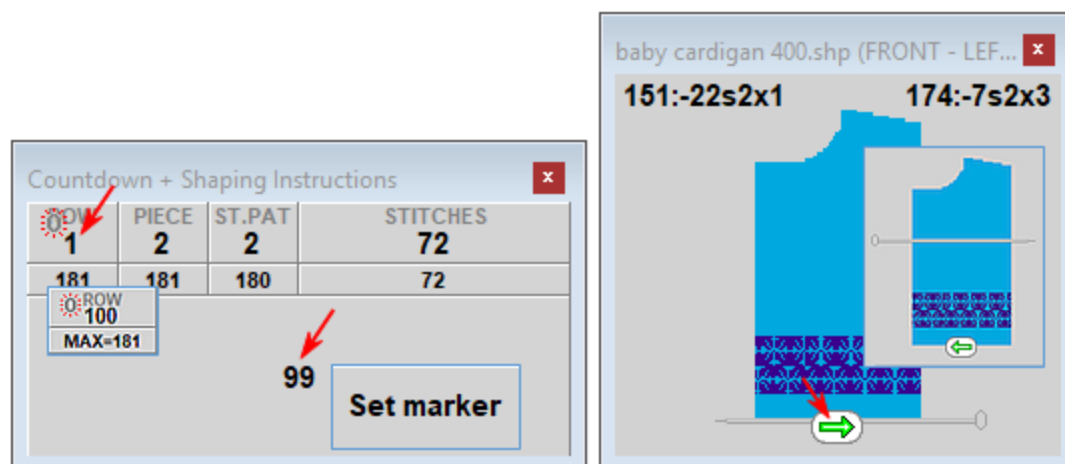
The "Countdown + Shaping Instructions" window ([See page 65](#)) shown on the left displays the initial information about the piece, such as the method (Hand knitting - Flat), overall number of stitches and rows, as well as how many stitches to cast on.

The "Piece Overview" window ([See page 91](#)) shows that the knitting is at the start, with the knitting direction from right to left. The first shaping instructions ([See page 93](#)) will occur at row 151 (see pink arrow).



The garment piece consists of 181 rows (see blue arrow above) and the stitch pattern of 180 rows (red arrow above). This means that, although it is not apparent, the stitch pattern is partly repeated vertically, and Row one of the repeat will be knitted at Row 180 of the garment piece, as indicated by the red arrows in the image on the left. As the first stitch pattern row is plain this does not have any consequences for the knitting, but it is something to keep in mind when a stitch pattern such as this, where a stitch pattern is matched to seemingly only appear on part of the garment piece, is used. Detailed

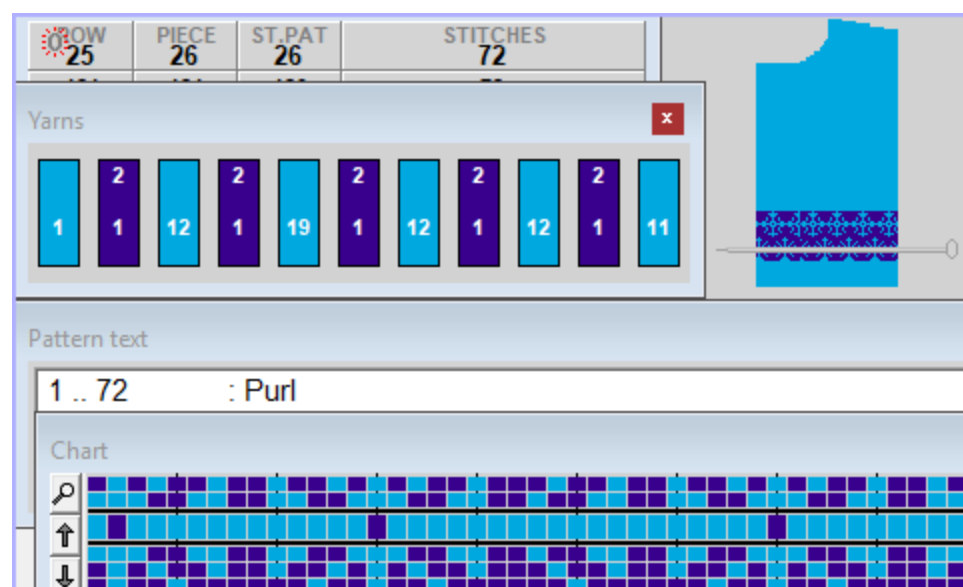
information about how stitch patterns can be applied in different ways can be found in the Stitch Designer manual.



The "Countdown + Shaping Instructions" Progress window is shown here at Row 1, after all stitches have been cast on. The knitting direction has changed and, although the shaping instructions do not start until Row 151, the Countdown + Shaping Instructions show that some action needs to be taken in 99

rows (at Row 100). The red arrows indicate the initial state.

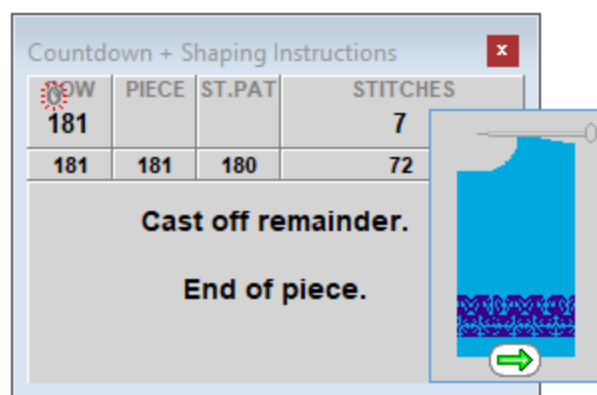
The insets show that a Marker needs to be set at Row 100. Marker instructions are added in the garment piece in Original Pattern Drafting. In this case it marks the point at which the sleeve will be joined, but it could also point to places where button holes need to be created manually or other points that needs to be physically marked, possibly by tying a piece of yarn to a stitch at that position. More information about adding markers can be found in the Original Pattern Drafting manual.



Different Progress windows were accumulated and shown on the left. The garment piece is at Row 25, where Yarns need to be changed to achieve the snowflake pattern.

Whereas the "Pattern text" (See [page 82](#)) instructions only show that 72 'Purl' stitches need to be worked, the "Yarns" and "Chart" windows show which colors need to be changed where. The "Chart" window (See [page 84](#)) does this visually, so that the overall pattern can be seen clearly, while the "Yarns" window (See [page 70](#)) gives the

same information but shows the colors in blocks with the number of stitches they have to be worked for.



current row boxes are empty.

For garment pieces that are knitted in more than one section, arriving at the end of a section will display a "Cast off remainder" message followed by "Then press the space bar to continue", which will display the instructions to knit the next section.

When the integrated garment piece is finished, DesignaKnit indicates this by a "Cast off remainder" instruction as well as an "End of piece" message in the "Countdown + Shaping Instructions" window.

The knitting needle is shown at the top of the piece in the "Piece Overview" window and the "PIECE" and "ST.PAT"

Machine Knitting process

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As working with the correct tensions is crucial for the knitted result to be as designed and expected, it is highly recommended to knit a tension swatch ([See on page 203](#)) before knitting garment pieces!

The general process has been described very concisely below and where necessary, page references have been provided to the relevant sections in the manual.

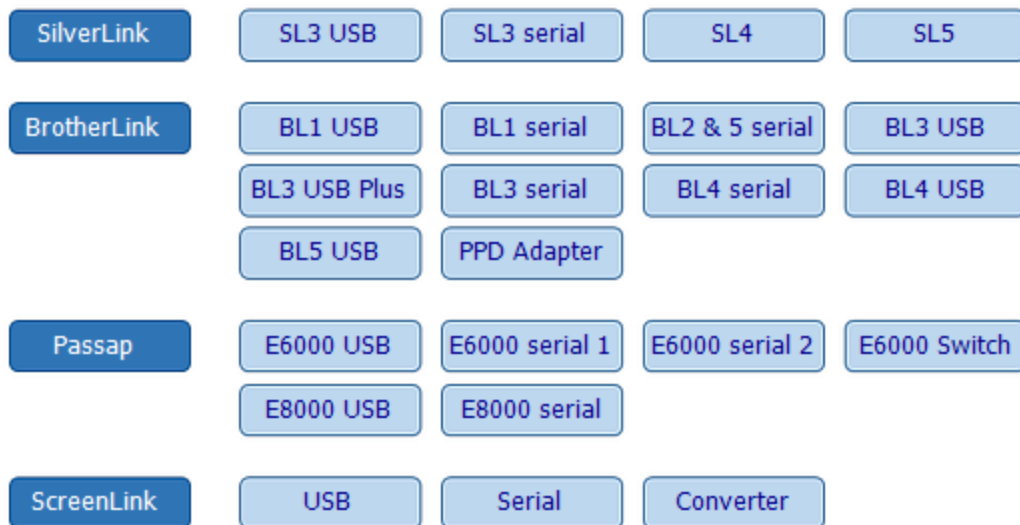
1. The physical setup, linking and configuration between knitting machine and computer should be established according to the instructions that were provided with the cable link. If necessary, the documentation can be accessed for each link ([See page 47](#)).
2. If the knitting machine has its own memory or a patterning device, the swatch, shape-only or integrated garment piece needs to be downloaded before it can be knitted interactively. For Brother, Passap and the Silver Reed PC10 and PE1 this is done through Stitch Designer and for other Silver Reed machines directly in Interactive Knitting. For non-electronic knitting machines, with or without a Reader device for punch cards or Mylar sheets, Interactive Knitting provides row by row instructions during knitting.
3. The swatch, shape-only or integrated garment piece ([See on page 96](#)) needs to be open in Interactive Knitting. If a swatch is to be knitted, its size needs to be entered. For a Shape-only piece, it needs to be decided whether the fabric facing the knitter is the Right or Wrong side. DesignaKnit makes the decisions for an integrated garment piece according to the information entered into the "Integrate" dialog in Original Pattern Drafting or Stitch Designer.

4. To start knitting at the beginning of the piece, the starting RC (Row Count) should show "0" in the "Countdown + Shaping Instructions" window, which can be achieved by clicking the "Start of section" button ([See page 54](#)) or by using the *Go / Start Section* menu option. Alternatively, the *Go / Go to RC* ([See page 25](#)) menu option can be used and row 0 entered.
5. Any required Alerts ([See page 107](#)) can be set by clicking the appropriate buttons.
6. The amber 'Ready' button ([See page 50](#)) should be clicked next, and its instructions followed. Stitches should be cast on and if rows of rib are required they should be knitted, ensuring that the carriage is at the side of the needle bed that is instructed in the "Preparing to synchronize Carriage" dialog when finished. The row count should be reset to "0" after knitting the rib, so that subsequent Interactive Knitting instructions will be synchronized correctly.
7. On clicking "OK", a brief check will be carried out to ensure that the connection between Interactive Knitting and the physical knitting machine exists. If no link can be found, one can be selected ([See on page 276](#)), otherwise the process continues.
8. Any actions that are needed on the knitting machine now need to be carried out. This could, for example, include setting point cams and setting levers for the required stitch type (Silver Reed), programming the knitting machine console, setting the KC Knob and pressing technique buttons for the required stitch type (Brother), programming the knitting machine console to knit the correct Technique and downloaded pattern (Passap) or, if a Punch card or Mylar sheet is used, inserting either of these correctly into the Reader equipment.
9. Once "OK" has been clicked on the "Prepare to synchronize Carriage" dialog knitting can be started. Any Colour Changer and carriage setting instructions that appear in the "Yarns" and "Countdown + Shaping Instructions" windows should be followed. With each pass of the carriage, the Interactive Knitting screen is updated, keeping DesignaKnit and the knitting machine synchronized. The red 'Stop' button is available during this process to stop the connection between DesignaKnit and the knitting machine if this should become necessary.
10. Knitting can be paused and resumed by using the 'Stop' ([See page 53](#)) and 'Go' ([See page 54](#)) buttons, which, in addition to being used when a new section of a pattern needs to be downloaded, can be particularly useful if several rows of the work need to unravelled ([See page 53](#)) and knitting continued afterwards. Knitting can also be interrupted by pressing 'Esc', 'Alt', space bar or any of the arrow keys on the keyboard.

Using Cable Links

Interactive Knitting is designed to be used with Cable Links ([See page 275](#)) that allow communication between knitting machine and computer. Each cable link has specific properties, possibilities and instructions, which have been described briefly in Specific Cable Links ([See page 278](#)). While detailed instructions are supplied with each purchased cable link, a brief overview is given in General setup ([See page 276](#)). Once knitting machine and computer have been physically connected, communication needs to be established by selecting the cable link in the knitting machine setup ([See page 121](#)) and finding the correct port number ([See page 277](#)).

Detailed descriptions, installation instructions and Interactive Knitting information for each cable link can be found on the [Soft Byte Ltd](http://www.softbyte.co.uk/cablelinkmanuals.htm) website (<http://www.softbyte.co.uk/cablelinkmanuals.htm>). The appropriate manual and / or driver can be accessed from this location and, if required, downloaded and / or printed.



For convenience, the documentation for each cable link can also be opened in an internet browser by clicking the appropriate button shown on the left. Each document describes the link and its parts, its installation and setup, which knitting machines it can interact with, driver installation and updates, troubleshooting tips and, where applicable, download and upload procedures as well as procedures and specific knowledge to take into consideration when using Interactive Knitting.

As using, setting up and finer points of cable links have been described in detail for each link in these documents, the Interactive Knitting manual only mentions some points that have a direct bearing on using Interactive Knitting, if necessary.

Soft Byte Ltd can only guarantee the correct functioning of and provide technical support for its own cable links and can be contacted ([See page 190](#)) to advise on the best combination in any particular situation.

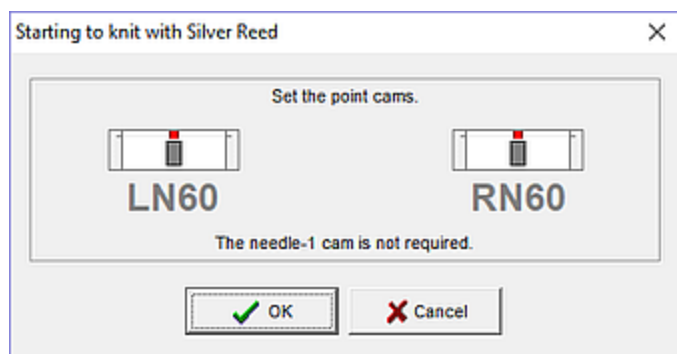
Knitting machines

Some information to bear in mind for the different knitting machines:

Silver Reed

Downloading to Silver Reed knitting machine takes place from Interactive Knitting, except for the Silver Reed PE1. Patterns that are too large to download in one piece are divided into sections and DesignaKnit will automatically download the next section when it is required. A message and download progress bar will appear and knitting should be stopped until the download is complete.

For the Silver Reed PE1 downloading has to take place from Stitch Designer. If a pattern is too large it will be divided into sections. When Interactive Knitting prompts for the next section, knitting stops automatically and the next section has to be downloaded from Stitch Designer after which Interactive Knitting can be switched to, where knitting can be resumed.



Point Cams - are used by Silver Reed to limit the area that the knitting machine carriage needs to pass over. If knitting does not extend to the edges of the knitting machine, the cams can be set and the carriage only has to be taken just beyond the point cams, rather than to the ends of the needle bed.

If a SilverLink 4 or 5 is selected in the knitting machine setup the dialog as shown on the left will appear to indicate where the Point Cams need to be set. If a magnetic link has been configured instead, this dialog will not appear and precise positions are not given,

although Point cams can still be set at estimated positions.

The positions of the Point cams are determined by the width of the swatch, shape-only or integrated garment piece that is knitted. As long as they are set wider than the knitting, the positions do not have to match the width of the knitting exactly. Setting them a bit wider than the actual knitting will save having to move them every time there is a shaping action to be taken ([See on page 55](#)).

When a SilverLink 4 or 5 is used, any other patterning or card reading device is redundant and therefore all the pattern variation switches are inoperative.

SilverLink 1 and 2 have been superseded by SilverLink 5 and are no longer supported by Soft Byte Ltd.

Brother

Downloading takes place from Stitch Designer. If a pattern is too large to be downloaded in one piece it will be divided into sections. Interactive Knitting will prompt whenever a new section is needed and will automatically stop. After switching to Stitch Designer, the next section of the pattern can be downloaded by using the *Transfer / Download* or *Transfer / Integrated Download* menu option ([See on page 220](#)). Switching back to Interactive Knitting, the file (swatch, shape-only or integrated garment piece) has to be opened again and the 'Ready' button clicked. After all its instructions have been followed, "OK" should be clicked, after which the physical and on screen carriages will be synchronized and knitting can continue.

Brother knitting machines preselect needles, except when using the Garter Carriage ([See on page 39](#)).

All patterns, irrespective of method, are downloaded as if no Colour Changer is used. For Fair Isle patterns, this means that the needle selection must be reversed if using the single bed Colour Changer. When the Colour Changer button on the Left Toolbar is activated, DesignaKnit will give reminders when the Negative button has to be pressed on the knitting machine console. Pattern techniques such as tuck, slip and Jacquard are not affected as, being one color per row patterns, they only use the rear feeder.

Passap

Downloading takes place from Stitch Designer. If a pattern is too large to be downloaded in one piece, it will be divided into sections by DesignaKnit. The first section needs to be specified on downloading before switching to Interactive Knitting. DesignaKnit will prompt whenever a new section is needed and will automatically stop, after which the next section can be downloaded from Stitch Designer by using the *Transfer / Download* or *Transfer / Integrated Download* menu option ([See on page 220](#)). Switching back to Interactive Knitting, the file (swatch, shape-only or integrated garment piece) has to be opened again and, after clicking the 'Ready' button, following the instructions and clicking "OK" on the "Preparing to synchronize Carriage" dialog knitting can be resumed.

Other machines

Non-electronic knitting machines and machines that use Reader devices for Punch cards or Mylar sheets can be connected to the computer by using a ScreenLink. Alternatively, the Magnet arm and KnitLink box combination of another cable link can be used if one is already present. Magnetic switch link should be selected in the knitting machine setup. The link enables Interactive Knitting to respond to each pass of the carriage to synchronize shaping, yarn changing and carriage setting instructions.

Although patterns cannot be downloaded to the knitting machine, it is important to select the correct knitting machine as DesignaKnit is then able to produce accurate templates, as well as differentiate between machines which do and do not preselect needles.

For non-electronic machines that use a Reader device to read punch cards or Mylar sheets, a Template has to be produced in order to punch out or shade in the correct positions. More information can be found in the Stitch Designer manual and in Integrated template ([See page 166](#)). The card or sheet is fed into the Reader device and Interactive Knitting will give the necessary instructions at the appropriate times.

For non-electronic machines without a Reader device, Interactive Knitting provides row by row instructions on the Interactive Knitting screen or in printouts and the stitch pattern has to be worked by hand instead of being transferred by punch card or Mylar sheet.

The limitations of a punch card or Mylar sheet mean that it is not possible to set up a whole garment piece for Cut and Sew by marking the outline in the pattern. However, a swatch can be knitted to the dimensions of the whole piece after which a paper pattern with the outline, either printed from one of the DesignaKnit print options or a commercial pattern, can be used for cutting out the piece.

Ready, Stop & Go



When viewing this manual on the computer, the cursor may be hovered over the image. Where the cursor changes to a hand it can be clicked on as a quick way of getting to the relevant section.

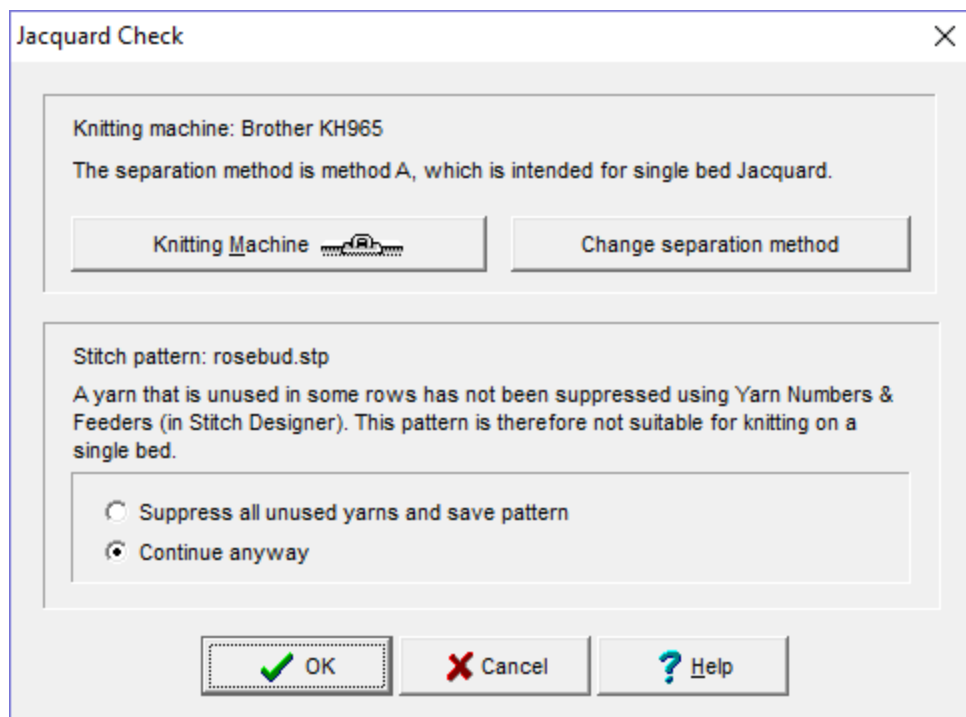
After the 'Ready' button is clicked once, "KNITTING" (synchronized) or "STOPPED" (not synchronized) is displayed underneath these buttons to show state of the connection between DesignaKnit and the knitting machine. When "KNITTING" is shown, the carriage on the DesignaKnit screen reflects the position of the physical knitting machine carriage, and when the physical carriage is moved, knitting instructions are displayed as and when necessary. If the connection is broken ([See page 52](#)) "STOPPED" will be displayed because on screen and physical carriage will no longer be synchronized. The position in the knitting is remembered by DesignaKnit and can be returned to by using the *Go / Resume from Last Stop* menu option. Knitting can then be resumed after clicking the 'Ready' button to pick up any instructions that may be necessary



After a swatch, shape-only or integrated garment piece has been chosen, the amber 'Ready' button should be clicked, or the "F3" key pressed, to open the "Prepare to synchronize Carriage" dialog. The instructions in this dialog detail actions to be taken after which clicking "OK" will synchronize the knitting machine carriage with Interactive Knitting so that the correct instructions will be given at each pass of the carriage.

The 'Ready' button should be used whenever instructions are needed to synchronize DesignaKnit and the knitting machine, such as:

- At the start of each piece to be knitted.
- At the start of knitting a new section if a garment piece consists of more than one section, such as when a neckline divides the work to knit each shoulder separately. The 'Ready' button will provide the correct instructions to synchronize DesignaKnit and the knitting machine carriage.
- After a further part of a pattern is downloaded from Stitch Designer, if the pattern is too large to be downloaded in one piece.
- When resuming work after it has been interrupted by clicking the 'Stop' button or by pressing 'Esc', 'Alt', space bar or any of the arrow keys on the keyboard. Any of these actions will cause the 'Ready' button to become available.



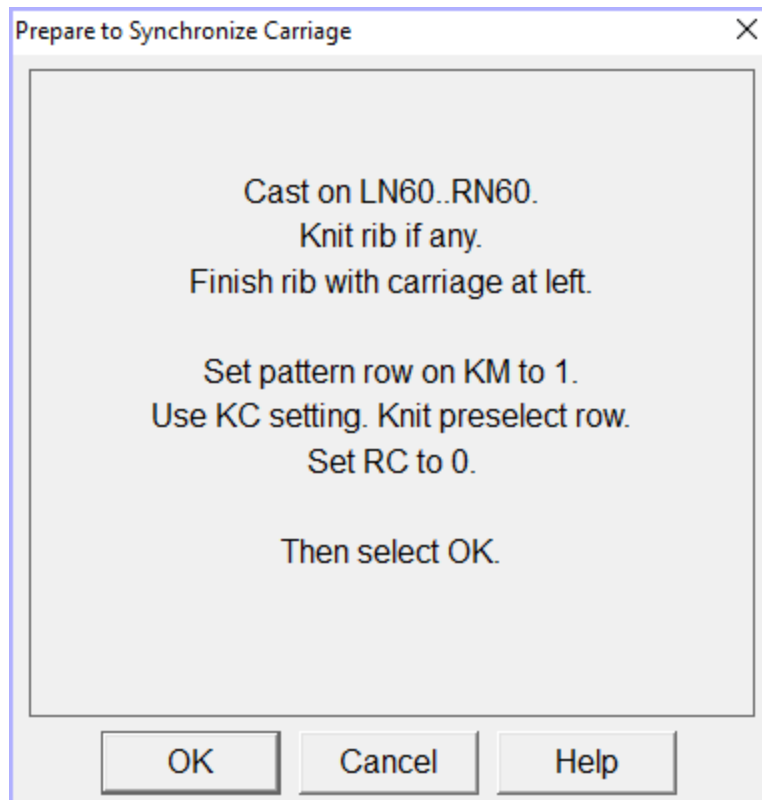
On clicking the 'Ready' button a Check will be performed for Jacquard stitch patterns, whether they are used as a swatch or as part of an integrated garment piece. If the Jacquard separation method that is selected in the knitting machine setup does not match the suppression status of any yarns that are unused in some rows of the pattern, a warning message such as the one on the left will be displayed.

In a different situation, the error might read: "The separation method is method B, which is intended for double bed Jacquard. Some yarns have been suppressed, which may produce uneven tension and

vertical floats at edges."

If this warning is displayed, knitting machine and separation method may be changed by clicking the appropriate button. Furthermore, either "Continue anyway" or "Suppress all unused yarns" may be selected after which "OK" will apply the chosen options.

The "Prepare to synchronize Carriage" dialog can also be accessed by pressing the "F3" key on the keyboard.



This dialog details all the instructions that need to be carried out before knitting is started. These include which needles should be used to cast on, which side of the needle bed the carriage should be on and how to set the knitting machine carriage. An example has been shown on the left. Each combination of knitting machine and piece to be worked (swatch, shape-only or integrated garment piece) can result in different instructions.

The indicated needles should be brought into working position and yarn (waste yarn or normal, as required) can be used to cast on the required number of stitches. If a rib is required, this should be knitted first, using the correct tension. When casting on or ribbing has finished, the carriage should be brought to the Left or Right position of the needle bed as indicated. If a preselect row needs to be knitted this will be indicated in the instructions and the row count should be reset to "0".

For some knitting machines the "Prepare to synchronize carriage" dialog includes an instruc-

tion to "Set pattern row number on KM to.." according to what row the knitting is to be (re)started at. If the pattern is separated into multiple passes of the carriage, such as is the case for Jacquard, Lace, and Intarsia that is knitted by using an AG50 carriage, this KM number refers to a carriage pass number and not a finished fabric row and has to be selected on the knitting machine.

If a pattern is too large to fit in the memory of the currently selected knitting machine it has to be downloaded and knitted in parts. When the second and subsequent parts are downloaded and knitted, the "Prepare to synchronize carriage" dialog shows the correct next carriage pass number, which has to be selected on the knitting machine to synchronize to the correct position in the piece.

After clicking "OK", a brief check will take place in order to make sure that there is a connection between Interactive Knitting and the knitting machine. If there is not, a further dialog will be presented to select a link ([See page 276](#)), after which the knitting machine and DesignaKnit are synchronized, ready to start knitting. Each pass of the knitting machine carriage is registered in Interactive Knitting, advancing the Progress windows accordingly and giving instructions as needed in the "Countdown + Shaping Instructions", "Pattern text" and "Yarns" windows. While the cable link connection is active, only the 'Stop' button is available and can be selected to prevent DesignaKnit from using the cable.

Certain actions will 'break' the connection between DesignaKnit and the knitting machine:

- Clicking the 'Stop' button
- Clicking the mouse in the "Piece Overview" window
- Pressing 'Esc', 'Alt', any arrow keys or the space bar on the keyboard
- Clicking any options in the Go menu or their corresponding buttons on the Left Toolbar
- Clicking the Colour Changer button on the Left Toolbar

- Switching to another knitting machine
- Switching to another piece
- Opening another shape file or stitch pattern
- Switching to another part of DesignaKnit

If the 'Stop' button is used, the knitting position is remembered and if the same piece is opened after any of the other actions, knitting will resume from that position by clicking the 'Go' button if this is still available or by using the *Go / Resume from Last Stop* menu option.

All actions listed above, except clicking the 'Stop' button, will lead to the 'Go' button being unavailable and the 'Ready' button will need to be clicked to resynchronize knitting machine and Interactive Knitting. The *Go / Resume from Last Stop* menu option can be clicked to make sure that the correct knitting position is chosen.

As it is physically not really possible to swap pieces on the same knitting machine before they are finished, each knitting machine allows for only one position to be remembered. Changing the knitting machine will lead to the currently open piece starting at RC "0", but changing back to the originally used machine will resume from the last Stop position if the 'Stop' button has been clicked prior to changes.



The red 'Stop' button becomes available when knitting is in progress, as indicated by the wording that appears underneath the indicator. It can be used to temporarily stop the connection between DesignaKnit and the knitting machine. The need for this may arise if the work has to be paused for a time, such as when a different project needs to be switched to, another section of a large pattern needs to be downloaded or if rows of stitches need to be unravelled. While the 'Stop' button is

available, the mouse wheel cannot be used to scroll through the work, to prevent breaking the connection between DesignaKnit and the knitting machine unintentionally.



Clicking the 'Stop' button marks the position in the work and shows that the knitting is stopped, rather than not yet started, by the wording underneath the indicator. If the same file and piece are opened after another file is switched to, or another section of DesignaKnit is worked with, it will be opened at the place where the 'Stop' button was clicked. The 'Ready' button can then be clicked to synchronize Interactive Knitting with the knitting machine.

If no changes were made in the position of the row that is knitted, the 'Go' button will be available and can be clicked to resume knitting.

For Brother and Passap, or knitting with a SilverLink 3 cable link, if another section of a large pattern needs to be downloaded, Interactive Knitting will automatically stop to enable switching to Stitch Designer to do so. When knitting on Silver Reed machines with a SilverLink 4 or 5 cable link, DesignaKnit will show a message to the effect that a brief pause will be taken while the next section is downloaded automatically.

The 'Stop' button is only available after the 'Ready' or 'Go' buttons have been clicked to establish the connection between knitting machine and DesignaKnit. Clicking the 'Stop' button makes the 'Ready' and 'Go' buttons available.

Unravelling - If the work needs to be unravelled, knitting has to be resumed at the correct row number. After the 'Stop' button is clicked, the knitting unravelled as far as required and all stitches returned to their needles, the Interactive Knitting screen has to be returned to the correct pattern row to resume knitting. This can be done either by pressing the down arrow key for each unravelled row or using the *Go / Go to RC* menu option and typing in the correct row count number. The 'Ready' button should then be clicked and its instructions carried out. Making sure

that the carriage is at the correct side, the pattern lever has to be reset to the correct technique after which the "OK" button can be clicked and knitting resumed.

For knitting machines with a Reader device, the punch card or Mylar sheet needs to be rewound to the correct row and synchronized with the DesignaKnit screen.

'Stop' and 'Go' states can also be toggled by using the "F2" key on the keyboard.



The green 'Go' button is available before the cable link connection with the knitting machine has been established or after it has been stopped. Clicking 'Go' establishes the connection between knitting machine and DesignaKnit without any further instructions and can safely be used to resume knitting after the 'Stop' button has been clicked as long as nothing has changed. The 'Go' button should only be used when it is certain that the knitting positions in DesignaKnit and the knitting machine are correctly aligned. It is often safer to use the 'Ready' button to obtain instructions before knitting is resumed.

When the 'Go' button is grayed out and unavailable, screen savers will be disabled. If the work needs to be interrupted temporarily for a screen saver to become active, the 'Stop' button should be clicked. Knitting can be resumed by clicking the 'Go' button.

The 'Go' button is available at the start of an Interactive Knitting project or after the work has been interrupted. Once the 'Go' button is clicked, it and the 'Ready' button are grayed out while the 'Stop' button becomes available.

The work can be interrupted by clicking the 'Stop' button or by pressing the 'Esc' or 'Alt' key, the space bar or any arrow key on the keyboard or by clicking one of the "Preview" buttons on the Left Toolbar ([See below](#)). The work can be resumed from the point where it was last interrupted by using the *Go / Resume from Last Stop* menu option ([See page 26](#)), after which the 'Ready' button needs to be clicked to connect knitting machine and DesignaKnit and continue the knitting process.

'Stop' and 'Go' states can also be toggled by using the "F2" key on the keyboard.

Preview

Previewing can be very useful to see what the instructions will look like at a particular point in the knitting, at which row a section breaks, where shaping takes place, any difficult color changes that may occur etc. The knitting can be previewed row by row, section by section, by using the appropriate buttons on the Left Toolbar, keyboard or mouse actions or any of the equivalent options in the Go menu ([See on page 22](#)).



Clicking the **Start of Section** button or using the *Go / Start Section* menu option moves to the start of the current section. If a swatch is knitted, this will be the beginning of the work, on RC "0". If a shape or integrated garment piece is knitted where the work divides into sections, such as either side of a neck opening, this button will jump to the start of whichever section is worked on. The current section is always displayed clearly, while inactive sections will be slightly faded. To move between sections, the "Start of section" button can be used, followed by "Previous row" or Down arrow to move into the previous section. This will work on any except the first section.



Clicking the **End of Section** button or using the *Go / End Section* menu option advances to the end of the current section. If a swatch is knitted, this will be the last row of the work. If a shape or integrated

garment piece with more than one section is knitted the "End of Section" will be the last row before the work moves on to the next section. To move between sections, the "End of section" button can be used, followed by "Next row", Up arrow or space bar to move into the next section. This will work on any except the last section.



Clicking the **Previous row** button or using the *Go / Previous Row* menu option decreases the RC number and repositions the knitting in the "Piece Overview" window to an earlier row. This button can be useful if some of the work needs to be unravelled after which the correct RC number has to be returned to to synchronize between DesignaKnit and the knitting machine.



Clicking the **Next row** button or using the *Go / Next Row* menu option increases the RC number and progresses the knitting in the "Piece Overview" window.

Keyboard - The space bar and arrow keys on the keyboard can also be used to move through the pattern. Pressing the Up arrow key or space bar moves up one row, while pressing the Down arrow key moves down one row. If larger jumps are needed in the preview, the "Shift" key can be held while using the Up and Down arrow keys to jump in increments of 5 rows, or the "Ctrl" key to jump in increments of 20 rows. The same can be done for the space bar, although this will only move upwards in the work.

Mouse - If the mouse has a wheel this can be used to scroll up and down through the pattern. The mouse wheel is disabled when the 'Ready' button has been clicked, to prevent accidentally losing the connection between DesignaKnit and the knitting machine.



Using any of these buttons, *Go* menu options, keyboard arrow keys or space bar breaks the connection between DesignaKnit and the knitting machine.

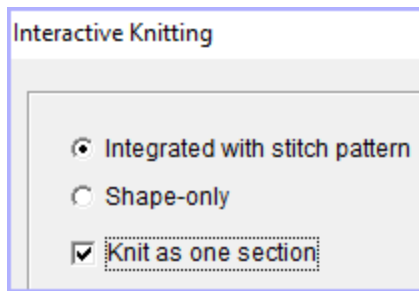
This will cause the RC (Row Count) positions of DesignaKnit and the knitting machine to be at odds with each other. Before resuming physical knitting the *Go / Resume from Last Stop* menu option can be used to reposition Interactive Knitting to the correct RC after which the 'Ready' button can be clicked to obtain relevant instructions and synchronize Interactive Knitting with the knitting machine. Alternatively, while scrolling backwards and forwards through the pattern the little row counter button ([See page 69](#)) could be used to keep tabs on which RC the work was at before starting to scroll.

Shaping

While needle selection and color changing (if a Colour Changer is in use) are automatically handled by the knitting machine, shaping instructions should be followed from the Interactive Knitting screen and stitches should be increased, decreased or held as instructed in the "Countdown + Shaping Instructions" window.

Any shaping (neckline or edge) actions, such as transferring stitches, working stitches together, taking needles into and out of working position, putting needles in hold position in order to knit a section of a garment piece on the needles in working position and picking up stitches, have to be done 'by hand'. The carriage must then be passed across the needle bed to finish and implement the action.

Neckline



Necklines can be shaped by casting off or holding stitches at the center of the garment piece, thereby dividing it into two sections. This scenario demands that the "Knit as one section" option that appears when the shape file is opened is unticked. This option is only available for Fair Isle and Right / Wrong side facing texture methods if the shape file piece has a neckline or other shaping that normally requires knitting in more than one section. When the work needs to be divided to knit, e.g., each side of the neck separately up to the shoulder, row by row instructions will be provided to work the shaping for both center and edge. The section that is worked on appears as normal in

the "Needle Bed" window, while the section that is not currently being knitted is dimmed ([See page 90](#)). The "Needle Bed" display should be looked at to see which center stitches should be cast off or held. All stitches that are not in the active section should either be put on waste yarn to be picked up later and their needles in non-working position or the needles can be put into holding position with the stitches in place. In the last case, care needs to be taken that the fabric is not pulled too much and careful adjustment of weights may be needed.

If a piece consists of two sections at the bottom that join higher up in the piece, a 'Hold' instruction is given by DesignaKnit instead of a 'Cast off' at the end of the first section. This situation may occur if a front top piece is knitted upside down, presenting the two shoulder sections at the start of knitting, rather than further in the work.

The "Knit as one section" is ticked and grayed out if the method of knitting is Jacquard, or Intarsia when an AG50 carriage is used. In these instances the piece can only be knitted in one section.

If the option is grayed out, DesignaKnit will present a warning such as the one shown on the right on accessing the garment piece, which will then be knitted in one section. The space of the neckline will be filled with whatever knitting is done on either side and will need to be manually cut out at a later stage.

The reason for this behavior is that Jacquard takes only one color yarn at each pass of the carriage. When casting off stitches only one color can be chosen and if this color does not exist in that particular pass of the carriage, it becomes impossible for a program to decide what to. The user can refer to the Interactive Knitting instructions and has freedom to decide how the casting off is handled. As this becomes even more complicated when shaping is done inside a garment piece as well as at the outer edges, the area is filled in. The Stitch Designer Cut and Sew option can be used to provide an outline that is knitted into the shape, so it can be followed easily with an Overlocker or Serger machine to cut out the shape and seal the edges.

On reaching the place where the work is to be divided into sections, the following actions should be taken:

- For **Silver Reed** knitting machines, the point cam at the opposite side on the needle bed to the carriage can be moved inwards to limit the area that the carriage needs to pass over. If both cams have to be moved, this is split over two passes of the carriage so that only the cam on the opposite side is moved ([See page 49](#)).
- For **Brother** knitting machines, if it is available, the "M" key must be pressed on the console to indicate that this row needs to be returned to later.



REMINDER: Because you are knitting Jacquard, the pattern piece will be knitted in a single section.

You should proceed only if you have integrated the piece with a pattern made using the Cut and Sew option from the Stitch Designer Shapes menu.

OK to proceed?

- For **Passap** knitting machines, a note must be made of the row number shown in the console display, as this has to be returned to when the second section is started.
- For knitting machines with a **Reader device**, if it is available, the "M" key must be pressed on the console to indicate that this row needs to be returned to later.

On finishing the first section, its last stitches can be cast off or knitted onto waste yarn, as required. The 'Ready' and 'Go' buttons automatically become available when a section is finished. Clicking the 'Ready' button, as instructed in the "Countdown + Shaping Instructions" window displays the instructions for starting the next section, such as where to place the carriage and what to set the row count to. Any stitches that were held should now be placed back onto their needle hooks, the needles placed back into working position, after which:

- For **Silver Reed** machines point cams should be placed back to maximum width of the piece or to the width of the second section, making sure that only the cam at the opposite side on the needle bed to the carriage is moved.
- For **Brother** machines, the correct row needs to be returned to by pressing the "M" key if it was pressed earlier. For the KH950i, the Stitch Pattern Row [ST.PAT] displayed in the "Countdown + Shaping Instructions" window must be entered and CF pressed. A preselect row must then be knitted.
- For **Passap** machines, the pattern in the console memory needs to be returned to the correct row. The row number on the console must match the RC number in DesignaKnit. The initial steps have been outlined in the table below, after which any remaining console programming needs to be done as normal.

Console display	Action to be taken
CAR	
l.nd -number	ENT
r.nd number	ENT
Flashing RC number	Enter the row number to advance or return to
Return number	ENT - This is to confirm the number of rows you wish to return
WAIT	Wait while the console rewinds
st.patt A	ENT
...SX	Set front lock to SX and ENT
~~~~GX	Set back lock to GX and ENT
r.empty	Empty pass to set the pushers for the next row
check sts	Check that all the needles and pushers match the last row

- For knitting machines with a **Reader device**, the punch card or pattern device must be retuned to the correct row. If instructed, a preselect row must be knitted, setting the carriage to 'Slip' in order not to inadvertently drop stitches when the carriage is passed over to the other side.

After preparations have finished, the "OK" button can be clicked on the "Prepare to synchronize Carriage" dialog. Yarns can be inserted into the appropriate feeders if they are not already in place and the second section of the neckline can be knitted. Interactive Knitting will display the correct row count number and the first section will now be shown in dimmed colors to indicate it is inactive at this point.

## Edges

Edges are shaped by increasing or decreasing stitches at the edges of a garment piece. Whether decreasing is done by casting off stitches or holding them on waste yarn for further working when the piece is finished is a matter of personal preference and dependent on how the piece needs to be sewn together with other pieces.

For **Silver Reed** knitting machines, point cams are used to control the patterning area in order to limit the movement of the carriage to the stitches that are actually used in the piece. When starting to knit a shape with increasing edge seams, DesignaKnit will instruct to position the point cams at the maximum width of the piece, even if the cast on stitches are considerably fewer than the maximum. Even if the cams need to be moved later, they should be positioned as instructed to start with and the first row should be knitted, passing the point cams fully. After the first row, the cam at the opposite side of the needle bed to the carriage can be moved inwards. After knitting the second row, the other cam (opposite to the carriage) can be moved inwards. As more needles are brought into the work, the cams must be moved outwards to at least include all the working needles.

The point cams do not have to match the width of the piece exactly, as long as they are outside of the needles in working position. The carriage must pass the cam for each row.

Point cams should only be moved when they are at the opposite side to the carriage. If they are moved when the carriage is on the same side, the pattern will shift sideways.

For **Passap** knitting machines DesignaKnit will instruct to cast on the number of stitches at the bottom of the piece. To avoid having to re-program the left and right end needles in the console every time an increase is encountered they can be set 5 or 10 stitches more than indicated, provided the locks pass the programmed needles on every row.

## Lace Knitting

If the Machine Lace symbols have been used to draw lace, knitting will involve either two carriages or setting a single carriage to Lace or Normal so that stitches can be transferred to the correct needles and yarn can be knitted to create eyelets.

Brother knitting machines use a separate Lace carriage to take care of the transfers, after which the normal carriage is passed across the needle bed to knit the yarn. The carriages must be at opposite ends of the needle bed so that each is out of the way of the other when it is in use.

Silver Reed knitting machines can either use a separate Lace carriage which can be set to 'transfer only' or 'transfer + knit', or the normal carriage set to Lace knitting, which transfers and knits in a single pass of the carriage. If the normal carriage with the "L" setting is used, the machine produces 'Thread Lace' knitting which knits a second, very fine, thread on the needles which would be empty if a Lace carriage were used, so creating an impression of eyelets. This is suitable only if the lace pattern is simple and eyelets are made by transferring stitches to their adjacent needle in the direction of knitting. The dedicated Lace carriage produces true lace where eyelets are created by transferring stitches and knitting them together.

Depending on the combination of knitting machine and symbols used in the pattern a warning such as the one shown on the left may be presented, after which Interactive



This pattern contains Brother Fine Lace symbols, but the knitting machine is not a Brother.

Knitting returns to the main screen in order to select a different shape or stitch pattern file. If this happens, cancel can be clicked or the "Esc" key can be pressed to empty the screen. The correct knitting machine can be chosen by using the *Options / Knitting Machine* menu option, after which clicking anywhere in the screen will present the main screen again in order to choose the required shape file or stitch pattern.

When a pattern includes Machine Lace symbols and is opened in Interactive Knitting, DesignaKnit may present an informational message such as the one shown here.



This pattern requires the lace carriage to be at the right.

This is because of the following setup:  
In KM Setup, Use of colour changer is OFF.  
In KM Setup, Start with CAL is OFF.

(If the lace carriage is required to start at the left, either change the setup, or use Modify / Shuffle to move the pattern up or down one row.)

After following the instructions knitting can be started by clicking the "Ready" button ([See on page 50](#)).

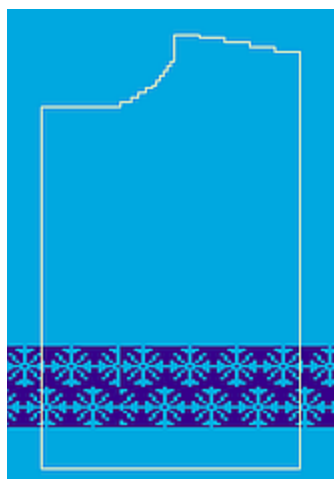
The Lace carriage (for Brother, and Silver Reed if it is set to 'Transfer') is passed across the needle bed as many times as necessary to make all the transfers, increasing the 'RC' number on each pass, while leaving the 'PIECE' pattern row number the same. The "Countdown + Shaping Instructions" window will count down until the carriage or its setting needs to be changed to knit the yarn. The 'PIECE' pattern row will then advance. If a normal carriage, set to Lace knitting (or the Silver Reed Lace carriage set to 'Transfer + Knit') is used, transfer and knit will take place in a single pass of the carriage and 'RC' and 'PIECE' pattern row will advance at the same time.

More information about using the lace symbols can be found [Lace](#).

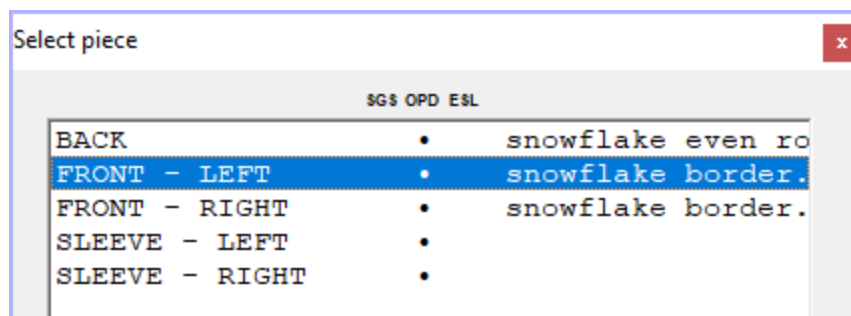
## Example

The Interactive Knitting process has been shown in logical steps in order to provide a demonstration from start to finish. An integrated garment piece ([See page 101](#)) was chosen as this provides the most detail. Both a Swatch ([See page 96](#)) and Shape-only ([See page 99](#)) are simpler versions of the same process. With a swatch, a stitch pattern is chosen and a size stipulated, while in a Shape-only there is no yarn information to take into account.

A front piece of a baby cardigan, integrated with a stitch pattern is used. The garment piece is shown as it appears on the Stitch Designer workspace after integration ([See on page 217](#)).



A file is opened ([See on page 39](#)) and the "FRONT - LEFT" piece chosen from the "Select piece" dialog.



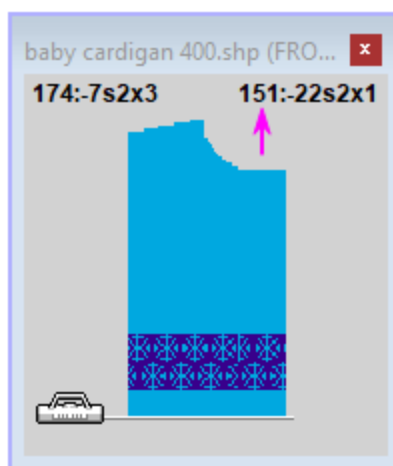
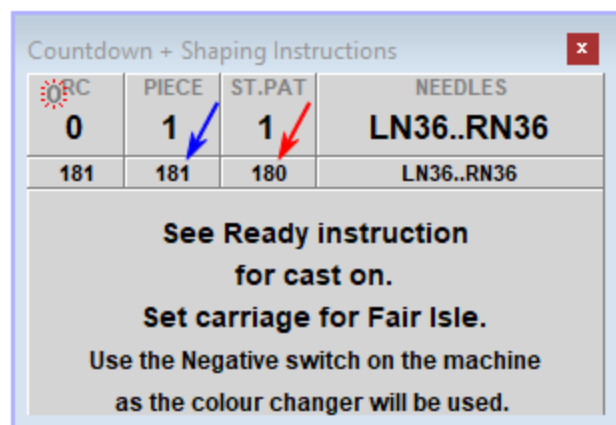
Selecting "Integrated with stitch pattern" and clicking "OK" will display this garment piece in the Interactive Knitting screen. The "Knit as one section" option is grayed out because there is only one section to knit ([See page 102](#)).

The chosen method is Fair Isle and the knitting machine a Brother KH965. For this exercise it is presumed that a cable link is installed and used ([See on page 47](#)) to synchronize between DesignaKnit and the knitting machine. If this is not required, as will be the case for non-electronic knitting machines or if a

manual method is elected, the instructions need to be followed from the Interactive Knitting screen and the pattern rows advanced one by one as each pass of the carriage is completed ([See on page 54](#)).



The RC number refers to a pass of the carriage and is not necessarily the same as a knitted pattern row. How many passes of the carriage are needed to knit one pattern row depends on the method of knitting.



The "Countdown + Shaping Instructions" window ([See page 65](#)) shown on the left displays the initial information about the piece, such as the overall number of stitches and rows, which needles will be in use (Left needle 36 to Right needle 36) and the instruction to set the carriage for Fair Isle. The "Negative switch" message appears because a Colour

Changer ([See page 38](#)) is in use in this

The "Piece Overview" window ([See page 91](#)) shows the knitting at the start, with the carriage on the left. The first shaping instructions ([See page 95](#)) will occur at RC 151 on the right hand side of the piece (see pink arrow).

RC	PIECE	ST.PAT	
180	181	1	
181	181	180	



The garment piece consists of 181 passes of the carriage (see blue arrow above) and the stitch pattern of 180 (red arrow above). This means that, although it is not apparent, the stitch pattern is partly repeated vertically, and row one of the repeat will be knitted at RC

180 of the garment piece, as indicated by the red arrows in the image on the left. As the first stitch pattern row is plain this does not have any consequences for the knitting result, but it is something to keep in mind when a stitch pattern such as this, where a stitch pattern is matched to seemingly only appear on part of the garment piece, is used. Detailed information about how stitch patterns can be applied in different ways can be found in the Stitch Designer manual.

Cast on LN36..RN36.

Knit rib if any.

Finish rib with carriage at right.

Set pattern row on KM to 1.

Use KC setting. Knit preselect row.

Set RC to 0.

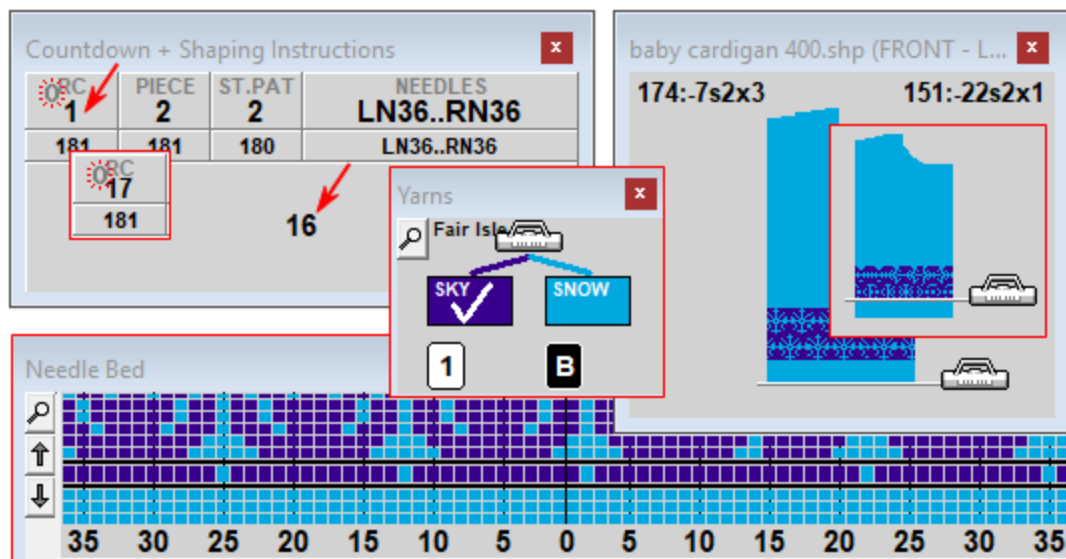
Then select OK.

DesignaKnit provides further instructions in the "Prepare to synchronize with Carriage" dialog when the 'Ready' button is clicked.

In this example, stitches need to be cast on from Left needle 36 up to and including Right needle 36. If rib is required ([See page 204](#)) it has to be knitted before clicking the "OK" button, finishing with the carriage at the position indicated. There are no instructions about how many rows of rib are to be knitted in this example because this garment was saved in Original Pattern Drafting. The knitting machine Row Counter will add each pass of the carriage and it will need to be reset to "0" before clicking "OK" to synchronize between DesignaKnit and the knitting machine.

Specific knitting machines will generate specific messages with regards to settings such as preselect row, KC settings etc. ([See page 52](#)).

When "OK" is clicked, the link between DesignaKnit and knitting machine is established and each pass of the carriage will be registered in Interactive Knitting, which will display yarn changes, technique changes and shaping instructions at all appropriate times.



Different Progress windows were accumulated to show the situation at RC 1 and RC 17.

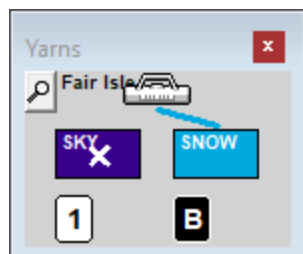
In this example the first instruction after the first pass of the knitting machine carriage will occur after 16 more passes, when a new yarn color needs to be introduced.

The "Countdown + Shaping Instructions" Progress window is

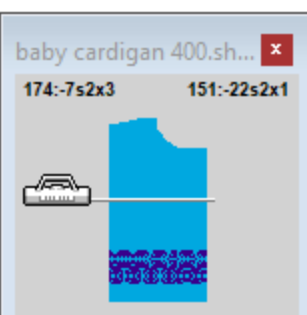
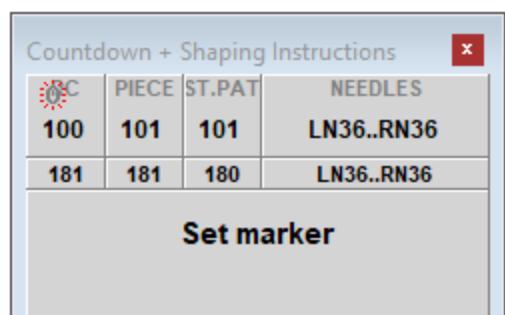
shown at RC 1, after the first pass of the carriage. The first time user's intervention is needed occurs after 16

passes of the carriage. The red arrows indicate the initial state. The insets (with red borders) show the situation at RC 17. As there are no shaping instructions at this point, the "Countdown + Shaping Instructions" window will be empty, and the "Yarns" window ([See page 70](#)) will show which color is to be threaded onto which feeder.

The inset over the "Piece Overview" window shows the position of the carriage in relation to the piece, which, at RC 17, is at the start of the Fair Isle section. The inset "Needle Bed" window ([See page 87](#)) is at RC 17 and shows how light and dark blue colors will be distributed over the pattern row, needle by needle.

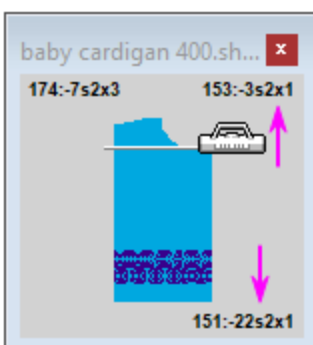
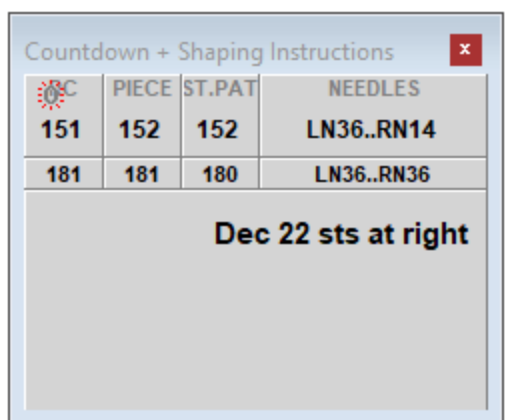


Knitting will carry on in Fair Isle mode without intervention, as the yarns are threaded correctly. The needles will be selected and deselected automatically, until the Fair Isle band is finished, after which the darker blue color can be taken from the feeder, as indicated in the "Yarns" window (see left).

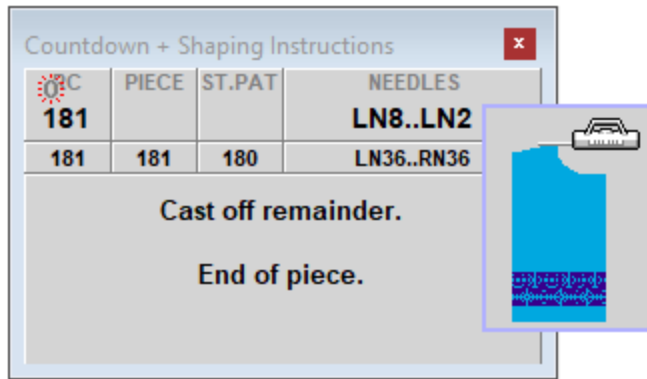


The next point where intervention is needed is at a place where nothing happens in either shaping or colors. This is at RC 100 where a Marker needs to be set. Marker instructions are added in the garment piece in Original Pattern Drafting. In this case it marks the point at which the sleeve will be joined, but it could also point to places where button holes need to be created manually or to other points that

need to be physically marked, possibly by tying a piece of yarn to a stitch at that position. More information about adding markers can be found in the Original Pattern Drafting manual.



Knitting continues until the first Shaping instruction appears in the "Countdown + Shaping Instructions" window at RC 151, which pushes this instruction to the bottom of the "Piece Overview" window, while the next expected Shaping instructions appear at the top on the side of the piece where they will take place (see pink arrows).



empty.

For garment pieces that are knitted in more than one section, arriving at the end of a section will display a "Cast off remainder" message followed by "Then select Ready" to continue with the correct instructions for the next section.

Shaping instructions will be displayed for each required row until the end of the piece, when DesignaKnit instructs to "Cast off remainder" and displays an "End of piece" statement.

The carriage is shown at the top of the garment piece and the "PIECE" and "ST.PAT" current row boxes are

# Progress Windows

Countdown + Shaping Instructions .....65

Yarns .....70

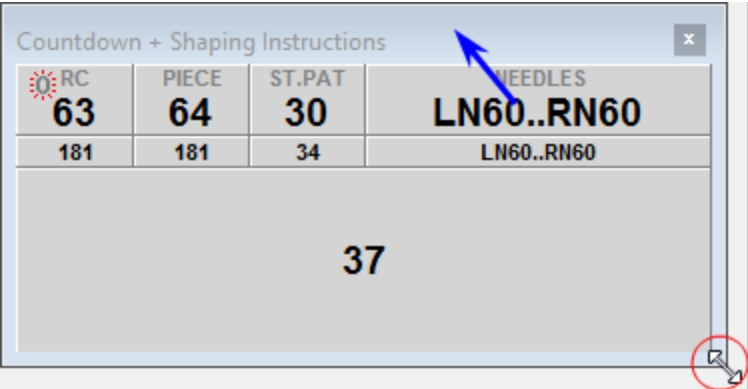
Pattern text .....82

Chart .....84

Needle Bed .....87

Piece Overview .....91

The Interactive Knitting screen contains Progress windows, which are fully synchronized with each other to display relevant information on the piece and the pattern row that is currently being knitted.



**Size and position of Progress Windows -** each Progress window may be closed by ticking the little cross in the top right corner, hiding it from view. If all windows are closed in this way, clicking the now empty screen will bring back all the windows in one of the preset Tile Arrangements.

Although a Machine knitting Progress window has been chosen, the same descriptions for size and position apply to the Hand knitting window.

Each individual window may be resized by placing the cursor over one of the sides or

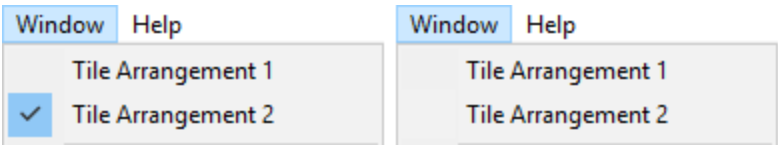
corners, where it will change to a double sided arrow (see red circle). The window can then be changed to the desired size by clicking, holding and dragging the arrow. Each window may be moved by clicking, holding and dragging its title bar (see blue arrow). The windows can be returned to their default size and position by choosing one of the *Window / Tile Arrangement* options.

PIECE	PIECE
63	63
MAX=181	181

Depending on its size, the "Countdown + Shaping Instructions" window will show or hide "Max =" in front of the totals, as shown on the left. The larger the window, the more detail can be shown.

To bring a window to the front its title bar needs to be clicked on. This may be useful to display all of its information if this is covered by another window, or to enlarge the desired window enough to be able to view all of its information comfortably. When a different menu option, such as *Options / Method of Knitting* is subsequently used, Interactive Knitting will revert to displaying all of the available Progress windows, sometimes jumping back to one of the preset Tile Arrangements.

If the *Window / Floating Windows* menu option is ticked, any or all of the Progress windows may be moved off the Interactive Knitting screen altogether. Clicking the option again, or selecting *Window* and one of the available Tile Arrangements will restore them within the main screen.



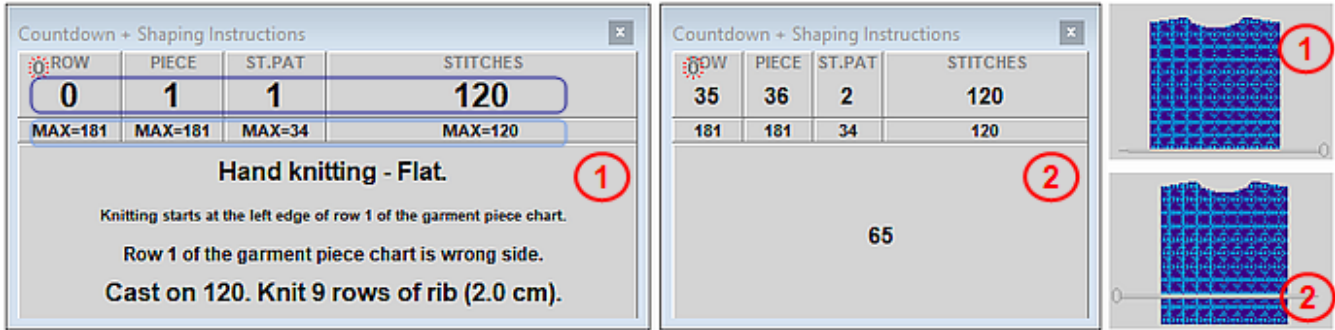
**Tile Arrangements** - the layout of the Progress windows can be altered by selecting a different Tile Arrangement in the *Window* menu (as shown in the first image on the left). There are up to five possible Tile Arrange-

ments, although fewer may be present on the menu, depending on whether hand or machine knitting is used and what is being knitted (Shape-only, integrated, swatch, type of stitch pattern). Each layout offers a slightly different view, favoring different Progress windows. Whichever Tile Arrangement is selected will be remembered for future Interactive Knitting sessions. Moving or resizing Progress windows will result in none of the Tile Arrangements being ticked in the *Window* menu option (as shown in the second image), and the user arrangement will stay in place for the current session. When DesignaKnit is closed and opened again in Interactive Knitting, the previously selected preset Tile Arrangement will be in effect.

## Countdown + Shaping Instructions

Hand Knitting .....	65
Machine Knitting .....	67

### Hand Knitting



The "Countdown + Shaping Instructions" window displays information about where in the piece the knitting is, and what to do next. The window is made up of sections to show the information for piece and stitch pattern separately and provides the current information in a larger font, while the totals or overall information is shown underneath in a smaller font. While the values in the top (see darker blue rectangle) change when the "Next / Previous row" button on the Left Toolbar or the keyboard Up / Down arrow keys are pressed, the information below this (see lighter blue rectangle) stays the same throughout the knitting to display the overall values of the piece.

In the examples above, two different positions have been shown in the knitting for an integrated garment piece, to show how the window changes according to where in the piece the knitting is. Images (1) and images (2) belong together. In image (1) the piece is at the start of knitting, before casting on. The number of rows of rib to be knitted is shown because the garment has been designed in Standard Garment Styling and not changed in Original Pattern Drafting In other cases, this part of the instruction would read: "Knit rib if any". The stitch pattern was applied in Stitch Designer, as Standard Garment Styling does not allow them to be applied directly. In image (2) the knitting has been advanced and the instruction part of the window shows "65", which means that knitting can continue without shaping (or other manual intervention) for another 65 rows, after which attention will be drawn to whatever changes need to be made.

"Hold 70"  
"!!!Hold 4 sts at start!!"  
"!!!Dec 8 sts at End!!"  
"Knit rib if any."  
"Pick up 50"  
"Cast off remainder then press  
the spacebar to continue."

The largest section of the window is reserved for instructions that appear during the knitting process: what to do before starting to knit, shaping instructions such as increasing, decreasing, casting on or off, holding stitches etc.

A few examples have been shown on the left. If there are no actual instructions to be put in this area, DesignaKnit provides a countdown to the next point where a different action needs to be taken, such as "65" in the image above.

The "Countdown + Shaping Instructions" window deals with Shaping instructions. Any color changes that need to be worked are not shown here, but need to be followed in the "Chart" and / or "Yarns" (See page 70) window.

The "Countdown + Shaping Instructions" window does not show specific instructions that are added to a stitch pattern in the form of Memo Symbols, such as specific ways in which increases or decreases are to be worked. These will be shown in the "Pattern text" (See on page 82) and "Chart" (See on page 84) windows.

ROW	PIECE	ST.PAT	STITCHES
0	1	1	120
181	181	34	120

ROW	PIECE	ST.PAT	STITCHES
8		9	20
20	20	20	20

ROW	PIECE	ST.PAT	STITCHES
0	1		120
181	181		120

The images on the left show how the information can be different, depending on whether an Integrated garment piece (1), a Stitch pattern (2) or a Shape-only (3) has been selected. There is no information in the top of the "PIECE" section for a stitch pattern as it is not applicable. Similarly, a Shape-only piece does not have any information in the "ST.PAT" section.

**ROW** - shows the row number preceding the one that is to be worked. The smaller number underneath displays the total

number of rows in the piece. In this example the shape file piece, whether Integrated (1) or Shape-only (3) consists of 181 rows in total, while the stitch pattern (2) consists of 20 rows in total.

The ROW number will change with each use of the space bar, arrow keys on the key board, "Next / Previous row" or "Start / End of section" as the position in the piece changes with these actions. The total number stays the same throughout. In image (2) 8 rows have been knitted out of a total of 20 and the next row to be knitted is 9.

ROW	ROW	ROW	ROW
63	0	7	70
MAX=181	MAX=181	MAX=181	MAX=181

The little button in the top left hand corner of "ROW" can be clicked to provide a temporary row counter. It sets the main ROW count to "0" and places the number that was there in the button. As the knitting is advanced (or previewed) by using arrow keys etc., the

main ROW number will increase, while the number in the button stays the same. The button can be clicked again to restore the situation to the actual ROW count. The process is demonstrated in the four images, where the ROW value of "63" was put on 'hold' by clicking the button, a few rows were advanced, showing that one value changes and the other stays the same, then clicking the button again, showing that the two values are added together to restore to the real situation.

**PIECE** - shows the number of the row that is to be knitted next for a shape piece, whether a stitch pattern has been integrated or not.

**ST.PAT** - provides information about the stitch pattern, whether it is knitted on its own, as a swatch, or as part of a shape piece. The top number refers to the next row to be knitted in the stitch pattern, and the smaller number underneath displays the total number of rows in one stitch pattern repeat. If a swatch contains more than the maximum number of rows of the repeat, it will start again at "1" when the maximum is reached. If it contains less, then the maximum number is given as whatever the swatch size determines.

**STITCHES** - displays the number of stitches that are needed in the row to be knitted. The smaller number displays the maximum amount of stitches in the current garment piece.

ROW	PIECE	ST.PAT	STITCHES
170	171	1	46
181	181	34	120

ROW	PIECE	ST.PAT	STITCHES
16	17	17	120
181	181	34	120

ROW	PIECE	ST.PAT	STITCHES
21	50	22	20
50	50	34	20

A few examples of the "Countdown + Shaping Instructions" window are shown on the left to illustrate different scenarios. Images (1) and (2) are of a garment piece that is integrated with a stitch pattern, while image (3) illustrates a swatch.

Image (1) shows that there are 46 stitches of the maximum 120 to be worked at row 171. The other stitches will have been cast off or held at this stage. The stitch pattern that is used consists of 34 rows and at row 171, the first row of a repeat is worked.

Image (2) is the same pattern, but earlier in the knitting, after row 16 is worked. The next row will be row 17 of the garment piece and row 17 of the stitch pattern repeat. The maximum 120 stitches are still in play, as no shaping has yet taken place.

Image (3) is of a 50 rows x 20 stitches swatch. Swatch row 21 of 50 has been knitted and the current stitch pattern repeat is at row 22 of a 34 row stitch pattern. The number of stitches in the stitch pattern will be repeated as many or as few times as needed to fill the stipulated 20 stitches of the swatch.

## Machine Knitting

Countdown + Shaping Instructions

RC	PIECE	ST.PAT	NEEDLES
0	1	1	LN60..RN60
181	181	34	LN60..RN60

See Ready instruction for cast on.

Set carriage for Fair Isle.

Use the Negative switch on the machine as the colour changer will be used

Countdown + Shaping Instructions

RC	PIECE	ST.PAT	NEEDLES
65	66	32	LN60..RN60
181	181	34	LN60..RN60

35

1

2

The "Countdown + Shaping Instructions" window displays information about where in the piece the knitting is, and what to do next. The window is made up of sections to show the information for piece and stitch pattern separately and provides the current information in a larger font, while the totals are shown underneath in a smaller font. While the information in the top (see darker blue rectangle) is updated with each pass of the carriage, the information below it (see lighter blue rectangle) stays the same throughout the knitting and displays the overall values of the piece.

In the examples above, two different points in the knitting have been shown for an integrated garment piece to show how the window changes according to where in the piece the knitting is. The images marked (1) belong together, as do the images marked (2). In images (1) the piece is at the start of knitting, before casting on and before the connection has been made with the knitting machine. In this example the Colour Changer has been set to be used in the knitting machine setup which leads to the instruction to use the Negative switch. In images (2) the carriage is higher up in the knitting and the Instruction part of the window shows "35", which means that there are 35 passes of the carriage to go before a user action is needed.

"Hold LN60..RN10"  
 "Hold 4 sts at left"  
     "Dec 9 sts at right"  
 "Set carriage for Fair Isle"  
 "Pick up 50"  
 "Use the Negative switch  
   on the machine"  
 "Cast off remainder  
   Then select Ready"  
 "Change to lace carriage (N)"

The largest section of the window is reserved for instructions that appear during the knitting process: what to do before starting to knit, setting the carriage, shaping instructions such as increasing, decreasing, casting on or off, holding stitches etc.

A few examples have been shown on the left. Where this is possible, the Instructions are shown on the left or right of the Instruction window, according to which side of the needle bed the action needs to take place. If there are no actual instructions to be put in this area, DesignaKnit provides a countdown to the next point where a different action needs to take place, such as "35" in the image above.

The "Countdown + Shaping Instructions" window does not show specific instructions that are added to a stitch pattern in the form of Memo symbols, such as specific ways in which increases or decreases are to be worked. These will be shown in the "Needle Bed" ([See on page 87](#)) window.

If the stitch pattern is Fair Isle or Right / Wrong side facing texture and contains Smart Symbols, these control the needle selection and will produce instructions at the appropriate times in this window to set or change the knitting machine carriage or knitting technique.

If the Lace Tool has been used to create lace, the "Countdown + Shaping Instructions" window will instruct how the normal and / or Lace carriage have to be set up and which carriage or setting to use. The "Piece Overview" window provides a visual reminder as to which carriage or setting is used ([click here](#)).

If there is no "Yarns" window because there is only one color in the design, the bottom left of the "Countdown + Shaping Instructions" window shows how the carriage is used, if necessary, and could read Tuck, Garter, Cable, Cable/Garter or plain knitting.

RC	PIECE	ST.PAT	NEEDLES
0	1	1	LN60..RN60
181	181	34	LN60..RN60

RC	PIECE	ST.PAT	NEEDLES
8		9	LN10..RN10
20	20	20	LN10..RN10

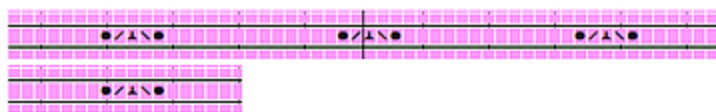
RC	PIECE	ST.PAT	NEEDLES
0	1		LN60..RN60
181	181		LN60..RN60

The images on the left show how the information can be different, depending on whether an Integrated garment piece (1), a Stitch pattern (2) or a Shape-only (3) has been selected to be knitted. For a stitch pattern or swatch, there is no information in the "PIECE" section as it is not applicable. The same applies to a Shape-only piece, where there is no information in the "ST.PAT" section.

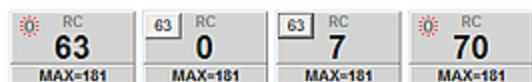
**RC** - shows the current Row Count number. This number should agree with the Row Counter on the knitting machine. The smaller number underneath displays the total number of rows in the piece. In this example the shape file piece,

whether Integrated (1) or Shape-only (3) consists of 181 rows in total, while the stitch pattern (2) consists of 20 rows in total.

The RC (Row count) is advanced automatically when knitting commences after clicking the 'Ready' button ([See page 50](#)). For previewing purposes however, the keyboard arrow keys, space bar, buttons on the Left Toolbar and Go menu options can also be used to move within the piece ([See on page 54](#)). The smaller total number stays the same throughout. In image (2) 8 rows have been knitted out of a total of 20 and the next row to be knitted is 9.



lace row. If the lace pattern is repeated horizontally, repeating transfers are only performed once, so that whether an eyelet sequence that requires 3 transfers (as shown in the image) occurs only once or multiple times, there are just 3 transfers on that row and the countdown will reflect this.



The little button in the top left hand corner of "RC" can be clicked to provide a temporary row counter. It sets the main RC to "0" and places the number that was there in the button. As knitting continues, or as the work is previewed by using arrow keys etc.,

the main RC will increase for each pass, while the number in the temporary row counter stays the same. The button can be clicked again to restore the situation to the actual RC. The process is demonstrated in the four images, where the main RC of "63" was placed in the temporary row counter by clicking the button, a few rows knitted, showing that one value changes and the other stays the same, then clicking the button again, showing that the two values are added together to restore to the real situation.

**PIECE** - shows the number of the row that is to be knitted next for a shape piece, whether a stitch pattern has been integrated or not. This number refers to a row, and not a pass of the carriage. For Fair Isle and Right / Wrong side facing texture methods, each pass of the carriage knits a row, but more passes of the carriage are needed for each row of Jacquard knitting or when a Lace carriage is used.

**ST.PAT** - provides information about the stitch pattern, whether it is knitted on its own, as a swatch, or as part of a shape piece. The top number refers to the next row to be knitted in the stitch pattern, and the smaller number underneath displays the total number of rows in one stitch pattern repeat. If a swatch contains more than the maximum number of rows of the repeat, it will start again at "1" when the maximum is reached. If it contains less, then the maximum number is given as whatever the swatch size determines.

**NEEDLES** - displays which particular needles are used in the current piece. If an unintegrated stitch pattern is downloaded to a knitting machine, it will be positioned at the center of the needle bed, but if a shape file is integrated with the stitch pattern, the garment piece, rather than the stitch pattern, is at the center of the needle bed ([See on page 234](#)). The needles are always shown as being to the Left or Right of the center. If shaping has taken place on one side, or a section of the knitting is held or cast off they will not be evenly distributed.

RC 170 181	PIECE 171 181	ST.PAT 1 34	NEEDLES RN15..RN60 LN60..RN60
RC 16 364	PIECE 9 182	ST.PAT 9 34	NEEDLES LN60..RN60 LN60..RN60
RC 16 728	PIECE 5 182	ST.PAT 5:17 34:136	NEEDLES LN60..RN60 LN60..RN60
RC 39 50	PIECE 50 50	ST.PAT 6 34	NEEDLES LN10..RN10 LN10..RN10

A few examples of the "Countdown + Shaping Instructions" window are shown on the left to illustrate different scenarios. Image (1) shows that not all needles are in use at this point and that in fact only the right side of the piece is being worked on (Right Needle 15 through to Right Needle 60). The other stitches will have been cast off or are held. Underneath, the maximum number of needles that is used to knit the garment piece are shown: 120 needles: 60 to the Left and 60 to the Right of the center of the needle bed. For Fair Isle and Right / Wrong side facing texture methods, each pass of the carriage will result in a knitted row. Image (1) is of a Fair Isle pattern, and the total number of rows may be uneven. The stitch

pattern row count (ST.PAT) starts from 1 after completing each repeat. In this example, row 1 of a 34 row stitch pattern is worked in this particular place in the knitting.

A pass of the carriage is not the same as a knitted row. Image (2) uses a Jacquard pattern (which needs an even number of rows), in which each row consists of more than one pass of the carriage because each color is knitted separately, so although the "RC" value changes, the information in "PIECE" stays the same until a row on the DesignaKnit screen has been completed. Images (2) and (3) show how this could look for a Silver Reed and Passap knitting machine respectively. In this example Silver Reed doubles the number of rows as there are two passes of the carriage for each row, while the Passap needs four passes of the carriage for each row on the DesignaKnit screen, according to the technique number that was used. The 182 rows of the garment piece are produced by 384 passes of the carriage in image (2) and 728 passes in image (3).

Image (3) shows that the stitch pattern section (ST.PAT) splits the rows in a "Knitted row:RC" notation both for the current position in the work (5:17) and the total of one stitch pattern repeat (34:136) for a Passap knitting machine.

Image (4) shows the notation for a 50 rows x 20 stitches swatch of a Fair Isle stitch pattern. The swatch row count is at 39 of 50, and the current stitch pattern repeat is at row 6 of a 34 row stitch pattern. The total number of needles in use is 20 (10 Left and 10 Right). The number of stitches in the stitch pattern will be repeated as many or as few times as needed to fill the 20 stitches of the swatch.

## Yarns

Hand Knitting .....

Machine Knitting .....

70

71

The "Yarns" window contains color information and is only present if more than one color is involved in the knitting. If it is absent and a Shape-only is selected, the "Piece Overview" and "Chart" or "Needle Bed" windows show the shape in a gray blue. If a swatch or garment piece contains only one color these windows will display that single color.

### Hand Knitting



The "Yarns" window displays all the colors that are used in the pattern at the current row. If its size is not sufficient to display all of the yarns, a message may appear in this window to refer to the "Chart" window (as shown here).

The RC (Row count) has to be advanced manually by using the keyboard arrow keys, space bar, buttons on the Left Toolbar or Go menu options as each knitted row is completed, to keep track of the work.



The "Yarns" window displays all the colors that are used in the current pattern row with their Yarn Symbol, if one has been assigned in Stitch Designer. If a name has been given to the color in the *Palettes / Names* menu option in Stitch Designer, this will be displayed when the cursor is hovered over the color block, as shown on the left. The number of stitches that needs to be worked is shown in each color block, while the visual representation of the row is shown in the "Chart" window ([See page 84](#)) and its text

instructions in the "Pattern text" window ([See page 82](#)). In the example shown here, Red has been assigned "R" as a Yarn Symbol and needs to be worked for 5 stitches when it occurs, Light blue has been assigned the symbol "~" and has to be worked for 11 stitches when it occurs. Cerise has not been assigned a Yarn Symbol and needs to be worked for 1, 2 and 4 stitches in turn when it occurs.

Whether stitches need to be knitted, purled or worked in any other way will be shown in the "Chart" and "Pattern text" windows combined. If stitch symbols have been used these will be displayed in the "Chart" window and Alerts will sound for them if they have been setup and activated in Stitch Designer. Alerts are not possible for the Knit and Purl stitches as well as any machine Smart Symbols that may have been used, such as Tuck or Weave.

Although the "Yarns" window does not show the knitting direction, this can be seen easily in the "Piece Overview" Progress window on the top right hand side ([See page 92](#)).

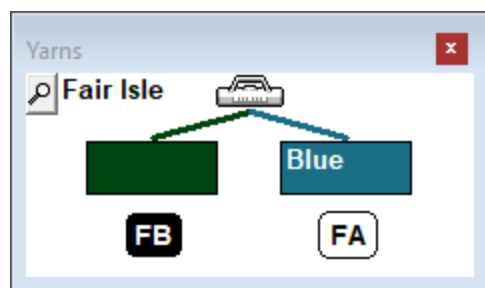
## Machine Knitting

<b>Fair Isle</b> .....	<b>72</b>
<b>Jacquard</b> .....	<b>74</b>
<b>Right &amp; Wrong side facing texture</b> .....	<b>76</b>
<b>Intarsia</b> .....	<b>78</b>

If the Yarns window is not present, because there is only one color in the piece, any relevant technique information that would normally be displayed here, such as whether the carriage is in plain knitting, Tuck, Garter or Cable mode, will be shown in the bottom left corner of the "Countdown + Shaping Instructions" window.

If the swatch or garment piece contains more than one color, yarn changes are indicated in various ways. The "Yarns" window displays all the yarns that are used in the current row, with the feeder numbers and letters or yarn sequence information ([See on page 270](#)). If Alerts ([See page 107](#)) have been set up, warnings will be given to change a color, thread or remove yarns and to press which Colour Changer button if a Changer is in use.

In general, if a Colour Changer is not used, the yarn is threaded into the rear feeder (feeder 1 or A), and never on its own in the front feeder (feeder 2 or B). If a Colour Changer is used, its yarn is threaded in the rear feeder so that it can be changed when required by pressing one of the Colour Changer buttons.

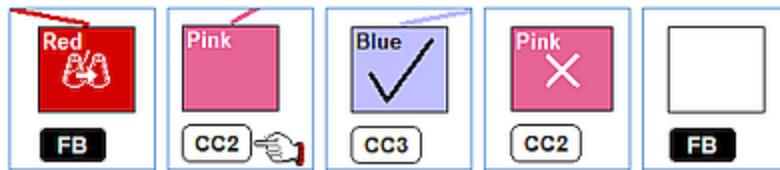


The image on the left is an example of what could be shown in the "Yarns" window, using a Fair Isle pattern. As the views and contents can be quite different for each method, they are explained in more detail below. If names have been assigned to the colors in Stitch Designer (*Palettes / Names*) they will be shown in the color block, as is the case here for "Blue". For Intarsia knitting, the yarn names will be displayed when hovering the cursor over the color block ([See on page 78](#)). The required carriage setting or knitting method is shown in the top left hand side of the window for all except the Intarsia method.

The **Zoom** button to the left of this can be clicked repeatedly to display the text in a larger or smaller font.

The colored lines that are shown from the carriage to the color blocks show which yarns are active, to be knitted at the next pass of the carriage. Two yarns will be active and connected by colored lines for Fair Isle unless a section of the pattern is encountered where only one color is used. For Jacquard and Right / Wrong side facing texture methods there will only be one line connected as each color is knitted separately. For Lace knitting, when the dedicated Lace carriage is in transfer mode, no lines will show as the carriage just passes over the needle bed, making the transfers without any yarn being knitted until all transfers have been made.

"FB" and "FA" in the image above refer to the feeders (F) that are used. As this example uses a Fair Isle pattern that is knitted on a Brother knitting machine without a Colour Changer, front feeder B and rear feeder A are shown. More detailed information about Yarn Feeders can be found in the Stitch Designer manual.



Symbols that may appear on the color blocks at various times have been depicted on the left and are common to most methods.

The **Cones** symbol on the first image means that this color has to be threaded into whichever position is indicated. Cones can appear on more than one color block if more than one yarn has to be threaded at the same time. In this example, Red has to be threaded to front feeder B.

The **Pointing Hand** symbol only appears if a Colour Changer is in use and indicates which button needs to be pressed on the Changer. Brother and Silver Reed Colour Changers are situated on the left side of the needle bed. Silver Reed machines need advance warning of color selections, so the required button has to be pressed when the carriage is on the right. For Brother knitting machines, the buttons need pressing when the carriage is on the left. The Passap Colour Changer is located on the right side of the needle bed and the required button has to be pressed when the carriage is on the right. In all cases DesignaKnit will prompt at the correct time by displaying a Pointing Hand symbol next to the button to be pressed.

If the Bell Alert has been activated ([See page 107](#)), this will sound whenever a color needs to be threaded or a different Colour Changer button needs to be pressed.

The **Tick** on the third image means that a color that has not been used in the previous rows, but is still threaded in the Colour Changer, will be reintroduced to the knitting. The Tick can appear in Fair Isle knitting when a color is unused for a few rows, possibly due to knitting a few rows with one color only. Removing the unused color from the feeder is optional (although it may decrease the chance of yarns getting tangled), but when it is needed in the pattern, the Tick is there as a reminder that this color must be in the feeder before continuing. Although a Pointing Hand is not displayed next to the Colour Changer button, it will also need to be pressed.

The **Cross** of the fourth image can appear on a color or on an empty color block. It means that this particular feeder will not be used for at least a few rows and the yarn must be removed. If it is shown on the front feeder, the yarn must be removed before knitting the row, as it consists only of deselecting needles which will be knitted with the yarn in the rear feeder.

An **Empty** color block, as shown in the last image, means that this position is empty. In this example, front feeder B has no yarn.

#### See Needle Bed Window

If the "Yarns" window is not wide enough to display all yarns a message will appear to refer to the "Needle Bed" Progress window. It can easily be resized to see if all colors will fit.

As, apart from the general information given above, the "Yarns" window has specific properties for different knitting methods, each of these has been described below.

## Fair Isle

For Fair Isle patterns, where two colors are worked simultaneously, the "Yarns" window will show the active yarns and into which carriage feeders or Colour Changer positions they need to be.

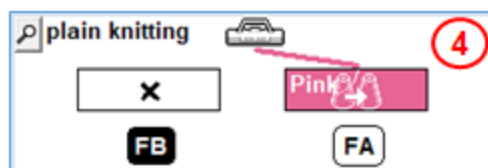
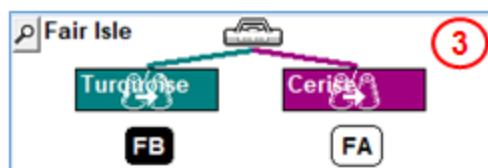
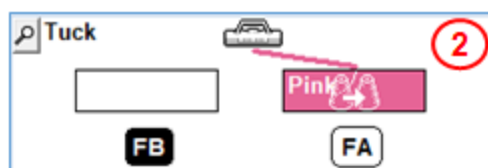
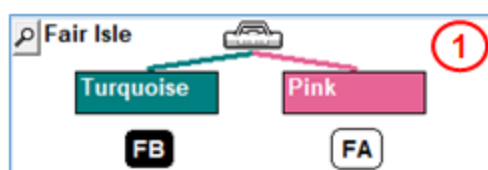
DesignaKnit will check and warn of any difficult color changes when the pattern is loaded or on activating / deactivating the Colour Changer. This could happen if the only color is in the front feeder or if the empty feeder is the one normally used for the main color. If a warning is encountered, the pattern can be reviewed and amended in Stitch Designer, or knitting may be commenced without altering the pattern as the message is merely a warning which will not prevent knitting.



Difficult colour change for feeder 2 at row 6.

If there is no Colour Changer in use, only two yarns will be shown in the "Yarns" screen and all colors need to be (re)threaded in front and rear feeder as indicated. If a yarn is not in use for a while, as may be the case when a band of plain color is encountered, an empty color block may be displayed or a cross may appear on it to indicate that this color needs to be removed, in readiness for a different yarn.

If Smart Symbols, such as Tuck, Slip, Weave are used in the pattern, the "Yarns" window will indicate the knitting machine carriage setting in the top left hand corner. In addition, the "Countdown + Shaping Instructions" window displays the change when it needs to take place. The "Yarns" window responds to the Smart Symbols row by row, always displaying the current setting.



Some examples of part of the "Yarns" window have been shown on the left to illustrate different scenarios. These examples are of different positions in a Fair Isle pattern that is knitted on a Brother knitting machine without a Colour Changer.

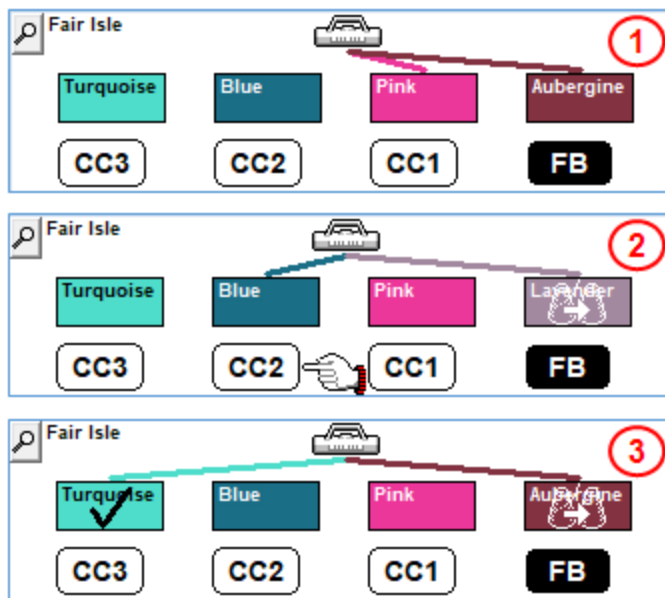
The front feeder is shown at the left and the rear feeder at the right for all knitting machines with two-feeder carriages when a Colour Changer is not in use.

Image (1) depicts a normal situation with a color in each feeder and no imminent changes. Pink is in the rear and Turquoise in the front feeder as they are worked simultaneously in one pass of the carriage.

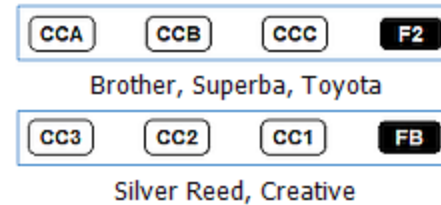
In image (2) the front feeder is empty and Pink needs to be threaded in the rear feeder, as illustrated by the Cones symbol. The carriage has been set Tuck, or needs to be set to Tuck, due to a Smart symbol in the pattern. If it still needs to be set, there will be a corresponding message in the "Countdown + Shaping Instructions" window.

In image (3) the knitting has reverted to Fair Isle and both colors need to be rethreaded in the feeders.

In image (4), DesignaKnit has encountered a band of plain knitting, causing a cross to appear on the empty feeder block, which means that whatever yarn was on there needs to be removed at this point because there are only deselecting needles in this row.



A few more examples have been shown on the left to illustrate a pattern that is being knitted on a Brother knitting machine with a Colour Changer. The Colour Changer shows three colors as the fourth is picked up into the main carriage rear feeder during knitting.



When a Colour Changer is used the feeder positions swap over so that the front feeder is shown at the right and the yarns that are in the Colour Changer (rear feeder) to its left. The rear feeder "A" is replaced with Changer position numbers for Brother knitting machines, leaving the front (main) feeder shown as "B" to distinguish it clearly from the Changer fed yarns. For Silver Reed knitting machines, front and rear feeders are represented by the numbers "2" and "1" respectively. As the Colour Changer is always attached to the rear feeder, feeder "1" is replaced by letters.

Image (1) above depicts the situation where knitting takes place without any imminent changes. Pink and Aubergine are knitted together.

Image (2) shows that Lavender needs to be threaded in front feeder "B", while at the same time, the CC2 button on the Colour Changer needs to be pressed to make sure Blue is the next color to be picked up and knitted together with the newly threaded Lavender.

Image (3) shows that Aubergine needs to be threaded in the front feeder, while Turquoise is the next color to be used from the Colour Changer. It shows a Tick, rather than a Hand symbol because this color has not been used in the pattern for at least a few rows. The corresponding button on the Colour Changer still needs to be pressed to make it the active yarn in the Changer.

When a Colour Changer is used, the needle selection must be reversed, because the Changer is connected to the rear feeder. Silver Reed and Creative knitting machines do this automatically when the Colour Changer button is switched on in DesignaKnit. For Brother knitting machines and Silver Reed using the PE1 or PC10, the negative switch on the knitting machine must be used to reverse the selection.

## Jacquard

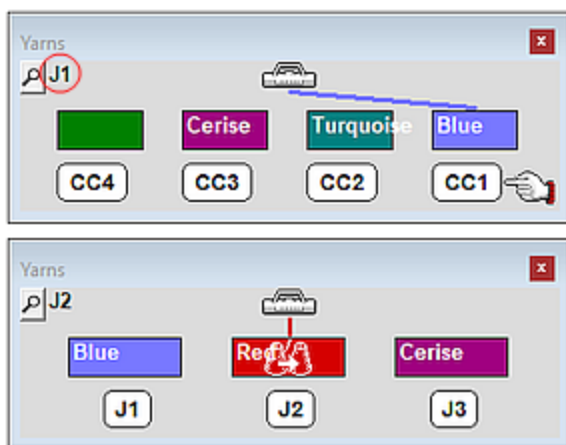
For Jacquard patterns the "Yarns" window will show the sequence of the yarns as it is calculated in Stitch Designer and, if a Colour Changer is used, which buttons need to be pressed to pick up the yarn that is needed next.

The number of yarns that are shown for Jacquard patterns is equal to the number of colors in the chosen method, so that 6 color Jacquard will show 6 color blocks, 2, 3, 4 or 5 color Jacquard will show 2, 3, 4 or 5 color blocks respectively. Although 6 color Jacquard is possible, in practice it is not used very often as it is difficult to keep this many yarns securely on the needles.

It is important to note that the numbers and letters of the yarns refer to the sequence in which they are used and do not necessarily coincide with the positions on a Colour Changer.

Yarn Numbers & Feeders will have been allocated to the yarns in Stitch Designer. If colors that are not in use need to be suppressed, either entirely or to be knitted on the second bed only, this has to be set in Stitch Designer (see the "Yarn Numbers & Feeders" chapter in the Stitch Designer manual).

If the knitting produces stripes of color instead of the expected pattern, this is most likely due to the needle selection being out of synch and the colors not being knitted in the correct sequence.



For Jacquard methods, if a Colour Changer is in use, up to six colors could be displayed in the "Yarns" window, depending on how many colors are used in the pattern as a whole as well as the method. E.g., if a 2 color Jacquard pattern contains 6 colors in total, 4 CC positions will be shown because this is generally the physical maximum of a Changer, and the yarns will be shown on the appropriate feeders as the knitting progresses. For a 6 color Jacquard pattern, 6 yarn positions will be shown.

If a Changer is not in use, the colors of the current pattern row are displayed. The top image on the left shows the situation with a Colour Changer in use, which can be seen by the preceding "CC" under the yarn blocks, and the bottom image shows the situation without a Colour Changer, where the sequence of the

three colors of this 3 color Jacquard pattern are shown. There would have been 6 positions for a 6 color Jacquard pattern. The yarn sequence number is always shown at the top (see red circle).

If names have been assigned to the yarns, these will be displayed on the color blocks.

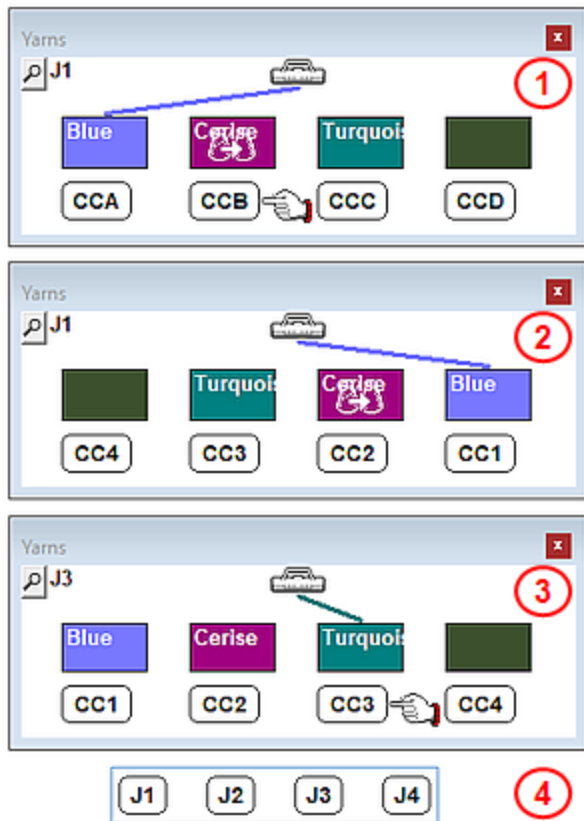
As Jacquard is worked by knitting one color at a time, there is only ever one line 'attached' between the carriage at the top and one of the color blocks. As the knitting progresses this line moves through the colors in sequence and each color is picked up and knitted in turn, resulting in one knitted pattern row. A Brother knitting machine has been used for this example with and without a Colour Changer. The knitting is shown at the same RC number. With the Colour Changer, the CC1 Changer button needs to be pressed to activate Blue, which is J1 in the yarn sequence, as indicated by the hand symbol next to it. Without the Changer, the next action is threading a new yarn color (Red), as indicated by the Cones symbol.

Whether a Colour Changer is in use or not, the correct sequence of yarns is essential. It is best to check for and correct any errors in Stitch Designer (using the *Check* menu option) before actually knitting in Interactive Knitting.

If a Colour Changer is used, all the yarns from the Colour Changer will be fed through the rear feeder of the knitting machine carriage, leaving the front feeder unused. The numbers and letters underneath the color blocks refer to the positions of the yarn in the Colour Changer as much as possible. However, a four yarn Colour Changer does not have positions 5 and 6, and these yarns will need to be threaded into the carriage feeder manually whenever they occur.

## TIP!

If there are more than four colors in a pattern and only four positions on the Colour Changer, some colors that occur only sporadically will share a Changer position. Attaching, for example, a physical label '5' to position '1' on the Colour Changer will help to keep track. Different ways to assign certain yarns to certain Colour Changer positions have been described in the Stitch Designer manual in the Yarn Numbers & Feeders and Memo numbers chapters.



Some examples of "Yarns" screens have been shown on the left. In all cases, the same 4 color Jacquard pattern was used with a Colour Changer. Image (1) shows the "Yarns" screen for a Silver Reed machine, image (2) for a Brother and image (3) for a Passap.

**Silver Reed** - as Silver Reed machines need to know about the next color to be picked up in advance, the required button (B) has to be pressed before the row is knitted. In this case, Cerise has to be threaded to position B on the Changer and its button needs to be pressed as well. The Blue yarn has sequence number J1 and Changer position "CCA".

**Brother** - the same position in the knitting results in slightly different instructions. The Colour Changer positions are in descending, numbered order. Cerise has to be threaded, but the Changer button does not need to be pressed at this time. Sequence number J1 and Changer position "CC1" match for the currently knitted yarn (Blue).

**Passap** - the same physical position in the knitting for a Passap knitting machine instructs that the Colour Changer button for Turquoise needs to be pressed. Whether a Colour Changer is used does not make a difference to the sequence and order of the yarns display, except that if a Colour Changer is in use, as it is here, a Hand symbol will be shown by the yarn

that needs to be picked up from the Changer. Sequence number J3 and Changer position CC3 match for the currently knitted yarn (Turquoise).

If a Colour Changer is not in use, the Jacquard sequence will be shown identically for all knitting machines in ascending order and preceded by "J", as depicted in image (4)

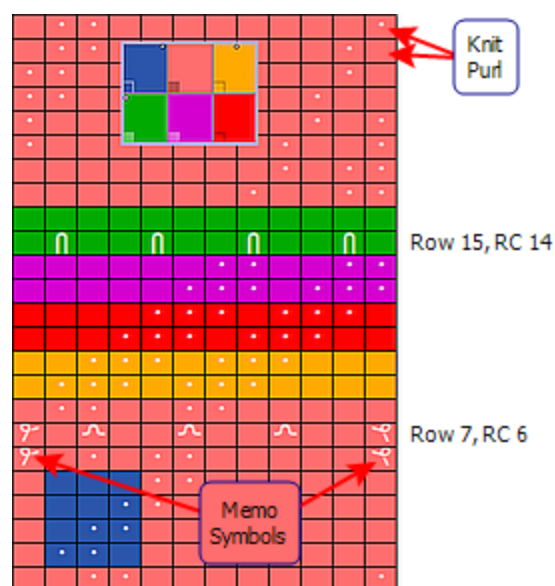
## Right & Wrong side facing texture

Although these methods are generally used for knitting with texture stitches, colors can be used. All colors that are used in the pattern will be visible in the Interactive Knitting "Piece Overview" and "Needle Bed" windows and up to four colors can be shown in the "Yarns" window if a Colour Changer is switched on. Whether these colors are shown in the feeders of the "Yarns" window, thus leading to prompts to change them when required, depends on the following conditions:

- There can be only one opaque color in a row and this will be the color that is shown in the feeder, regardless of how many other, transparent colors may be in the same row.
- A transparent color will be shown in a feeder if it spans an entire row. If there is more than one transparent color in a row without an opaque color, DesignaKnit will choose the color that occurs most.

There can be only one type of Smart Symbol in any one row, although any number of Memo symbols can be used. If Smart Symbols are used, the "Yarns" window will indicate the knitting machine carriage setting in the top left hand corner. Instructions to change this setting are also given in the "Countdown + Shaping Instructions" window at the appropriate time.

To draw attention to a Memo symbol, an alert can be activated for it in Stitch Designer and this will play in Interactive Knitting when "Stitch Symbol Alerts" have been switched on ([See page 107](#)).



In order to show different scenarios, the (Right side facing) stitch pattern shown on the left has been devised with a variety of colors and stitch symbols. Part of the Palette has been super-imposed to show that Pink, Green and Purple are opaque and the other colors transparent.

The pattern is mainly designed with Knit and Purl stitches, but 'Weave over' and 'Tuck' symbols, as well as two Memo symbols have been added to show their effect.

Rows 7 and 15 are the rows as they are in the pattern in Stitch Designer. In Interactive Knitting the Row Count (RC) is at the point where the row is about to be worked, so its number is one lower than the stitch pattern row.

The blue color of the block in the lower part of the pattern is transparent and, as it does not stretch across the row, will be ignored in the Interactive Knitting instructions. It will, however, be shown in the "Needle Bed" and "Piece Overview" Progress windows.

Even though Yellow is a transparent color, it is recognized as a color that needs to be threaded into the Colour Changer and knitted, because it stretches across the entire row.

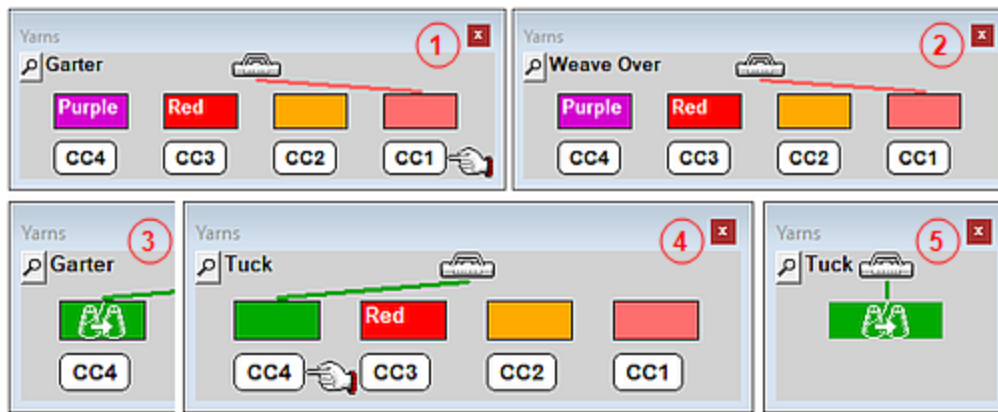
A warning such as the one on the right may appear if a color change would need to happen on the opposite side to the Colour Changer. The row numbers that are mentioned refer to the row numbers in Stitch Designer, which is the ST.PAT number and not the RC number in the "Countdown + Shaping Instructions" window.



This pattern has colour changes on even numbered rows (2, 6, 8, 18).  
A colour changer has been configured, but it cannot be used for such changes.

If there are not too many of these rows and this yarn change can be done manually, the warning can be ignored so that the Changer is still used for the rest of the pattern. However, if there are many of these occurrences, it can be easier to adapt the pattern in Stitch Designer.

It is recommended to run *Check* in Stitch Designer prior to knitting with Interactive Knitting in order to avoid this type of warning.



In this example, only some of the colors have been assigned names in Stitch Designer and only those names are shown on the color blocks. The Colour Changer is enabled for all except image (5).

As a Brother knitting machine was used to produce these images, the feeder numbers are

descending from left to right.

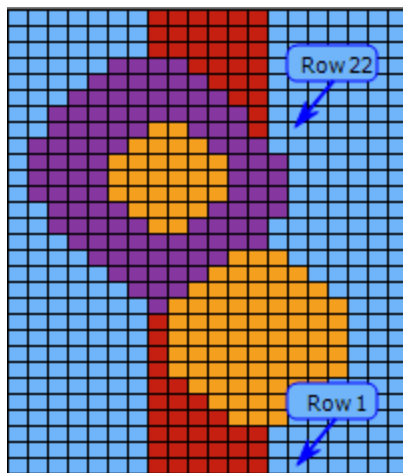
Image (1) is at RC 0, just before knitting starts. The first four colors that will need to be knitted have been detected and are shown on their Colour Changer positions in the order in which they will be needed. The CC1 Changer button needs to be pressed to cause Pink to be used. As the pattern contains Smart Symbols, and generally these are not used on the first row, the carriage setting will be "Garter" until such time as a Smart Symbol is encountered. If there are no Smart Symbols in the work, the carriage setting will read "plain knitting" throughout. If Smart Symbols are used in the pattern, the carriage will revert to "Garter" on the rows where there are no Smart Symbols.

Image (2) shows the pattern at RC 6, where 'Weave Over' symbols are used, necessitating the carriage to be set for 'Weave Over'. An accompanying message will be displayed in the "Countdown + Shaping Instructions" window at RC 6.

Image (3) shows the pattern at RC 13 when Green needs to be threaded into Colour Changer position 4, instead of Purple. In image (4) Tuck symbols are encountered at RC 14. The knitting machine carriage needs to be set to 'Tuck', which is also displayed in the "Countdown + Shaping Instructions" window. Colour Changer button 4 also has to be pressed, as indicated by the Hand symbol in order to activate this color for the next pass of the carriage.

Image (5) depicts the situation without a Colour Changer. The "Yarns" window displays one color at a time, which is fed through the rear feeder of the knitting machine carriage. Carriage setting changes are indicated at the top left hand side and in the "Countdown + Shaping Instructions" window, as usual.

## Intarsia

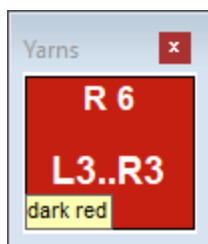


Intarsia is primarily a manual technique to knit larger areas of color into otherwise plain fabric. This can be achieved by laying yarns across the necessary needles, after which passing the carriage across will knit them into the fabric.

The stitch pattern shown on the left was used to demonstrate different views of the "Yarns" window for knitting machines without and a Silver Reed machine with an AG50 Intarsia carriage. There are four colors in different blocks and rows 1 and 22 were used in the examples below. A Colour Changer is not applicable, as yarns are laid across the needle bed instead of being fed through a carriage.

There is no Colour Changer option for Intarsia as it cannot be used.

The "Yarns" window shows the layout on the needle bed as it is facing the knitter, so that the left side is on the left and the color blocks are shown in the order from left to right.

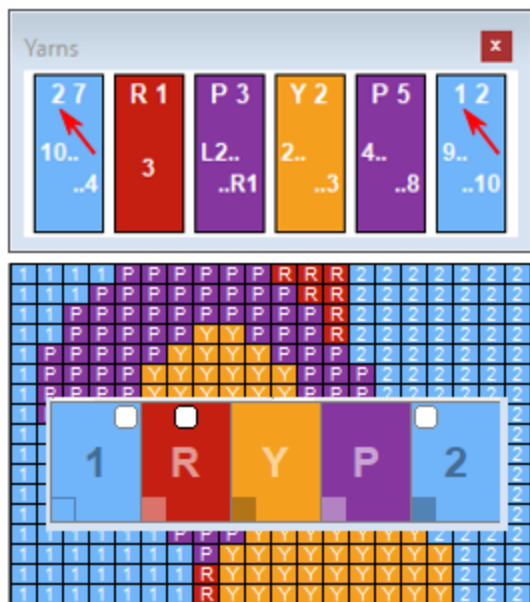


As there is a great likelihood of the color names taking too much space, Yarn symbols are used instead for Intarsia and are displayed along the top of the block, together with the number of needles that are occupied by this yarn. In this example Yarn symbol "R" will be used on 6 needles. If a Yarn symbol has not been assigned in Stitch Designer (*Palettes / Yarn Symbols*), this position will be blank, leaving only the number of needles used.

Colour names, if they are assigned in Stitch Designer (*Palettes / Names*) will appear in the lower left hand side of the block when the cursor is hovered over it, as shown by "dark red" in this example.

The middle section of the block indicates which needle numbers are used for this particular yarn. Numbering always starts from the center outwards to Left and Right, so that a notation of "10.. ..4" always indicates the needles from the left towards the center and a notation of "4.. ..10" always indicates the needles to the right and away from the center. DesignaKnit indicates "L(ef)" and "R(ight)" in front of the needle number only where the color crosses the center of the needle bed as in this example where 3 needles to the left and 3 to the right of the center are used.

Some planning is necessary to calculate how many balls or cones of yarn are needed to prevent floats. E.g., if only two cones of yarn (blue and red) were used to span the first three rows in this example, floats of blue would end up behind the red stripe. It would be better to use 2 cones of blue and one of red, crossing the yarns at the join points so the fabric is smoothly knitted together. In the fourth row, as orange enters the work, one cone of orange has to be added.



## TIP!

Different cones of the same yarn can be indicated by duplicating this yarn in Stitch Designer.

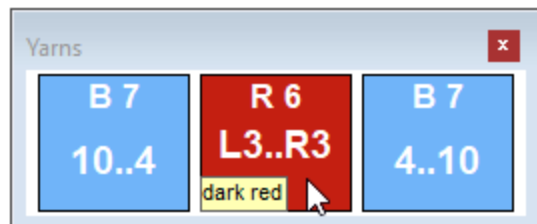
If a pattern needs to be knitted using more than one ball or cone of the same color, it is possible to use different instances of the same yarn palette color to represent different cones of the same yarn. This will facilitate using separate areas of the same yarn, while distinguishing between them. The pattern needs to be prepared in Stitch Designer by duplicating the color in the palette, assigning a different Yarn symbol to each and applying the duplicate color to the area that is to be knitted with this.

In the example on the left, the same light blue yarn is used on two sides of the stitch pattern. If this were knitted by using one cone, there would be large floats, not to mention the possible tangling of the other colors into these floats.

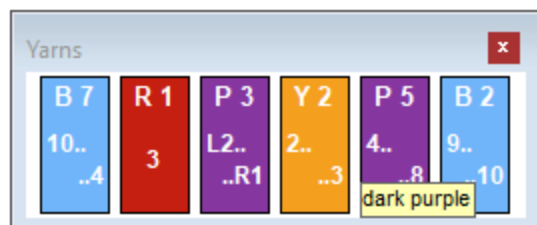
The light blue color was duplicated in the Stitch Designer palette and given "1" and "2" as Yarn symbols, as can be seen in the part of the palette that is superimposed on the stitch pattern. In the stitch pattern, the "Fill" design tool was then used to replace one instance of light blue (1) with the other (2) in the area on the right. After switching to Interactive Knitting, the Yarn symbols "1" and "2" are clearly visible in the "Yarns" window (see red arrows) and to all intents and purposes, the two instances of this color are seen as two separate yarns. The same symbols 1 and 2 could also have been used to distinguish the two instances of purple.

### With a normal carriage

When the normal knitting machine carriage is used, its feeder(s) will be empty. Yarns are laid across the required needles as needed for each pattern row and each pass of the (empty) carriage will knit that pattern row. This section also applies if a non-electronic Intarsia carriage is used.



RC0, Pattern row 1



RC21, Pattern row 22

All needles of one pattern row have to be brought forward manually, after which yarns need to be laid over them, making sure that they are positioned correctly where they join in order not to leave gaps between color areas. Passing the carriage across will knit the row. In the example on the left, pattern rows 1 and 22 have been shown.

The color name that was defined in Stitch Designer appears when the cursor is hovered over the block.

Each block contains the Yarn Symbol if one has been assigned ("B", "R", "P" etc.) together with the number of stitches that has to be worked in this color. In the top image 7, 6, 7. The location of the needles that are to be occupied by this yarn is shown in the middle part of the block.

At RC "0", which is pattern row 1, color "B" has to be laid over left hand side needles 10 up to and including 4, as well as right hand

side needles 4 up to and including 10, while color "R" (dark red) has to be laid over the 6 middle stitches. When the carriage is passed across, all the yarns will be worked.

At RC "21", which is pattern row 22, all colors are used on one or more needles and both light blue and dark purple are repeated in different blocks. Different Yarn symbols could have been used to indicate different cones of yarn ([See page 80](#)). The notation of which needles are used adjusts to fit the color blocks, and can be tweaked by resizing the "Yarns" window.

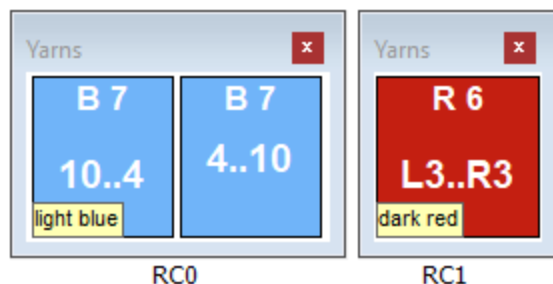
Each pass of the carriage produces one pattern row when Intarsia is worked with a normal or a non-electronic Intarsia carriage. RC "0" is the point before knitting is started and matches row "1" of the pattern. On a piece of knitting that comprises 20 pattern rows, RC "0" to "19" will describe the pattern and RC "20" will be the cast off row.

### With the AG50 Intarsia carriage

When the AG50 Intarsia carriage is used, one color is dealt with at a time. Pulling the carriage across the row of selected needles will knit only one color. Working each color in turn as shown in the "Yarns" window will build them into the fabric.

If a Silver Reed + AG50 Intarsia carriage is selected in *Options / Knitting Machine*, an Intarsia pattern can be downloaded from DesignaKnit, which means that, rather than pulling the required needles forward manually, they will be selected and put into the required position automatically.

Pattern row 1



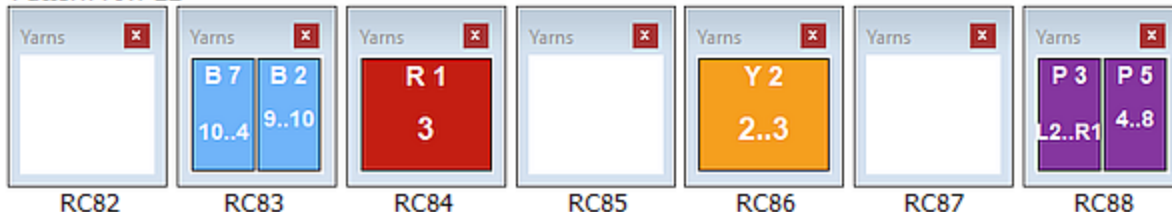
The yarn that is shown in the "Yarns" window needs to be laid over the required needles, after which the carriage is pulled across, knitting the single color.

In this image, pattern row 1, which contains two colors is split into 2 passes of the carriage, RC0 and RC1.

As only one color is worked at each pass of the carriage there are at least as many passes of the carriage needed for each row as there are colors in that row so, although the pattern may contain 64 rows, the number of carriage passes needed to complete the pattern can be far greater.

In this example, needles 10 up to and including 4 on the left and needles 4 up to and including 10 on the right will be pulled forward for the light blue "B" yarn to be laid across, after which the carriage can be moved across the needle bed. As there is a gap between the blue and the red areas, two balls or cones of blue need to be used ([See page 80](#)) to keep the tension correct and avoid floats forming at the back of the fabric. Colour blocks need to be planned carefully for complicated patterns to work out how many balls or cones of color are needed.

Pattern row 22



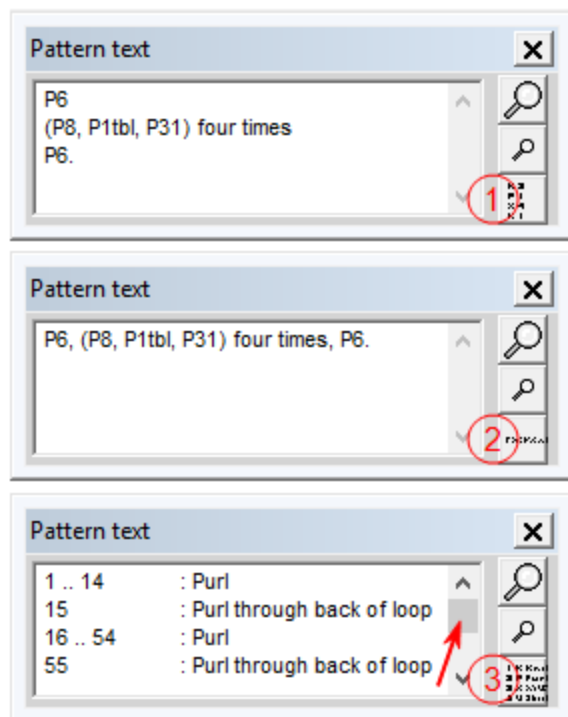
The images above demonstrate that when there are more colors in one row, multiple passes of the carriage will be needed in order to complete one pattern row. Pattern row 22 in this example contains four colors and each

one has to be worked separately. The process is illustrated in the images, showing the RC numbers underneath each "Yarns" window. The size of the "Yarns" window has been greatly reduced in order to show them all in one row. Extra passes of the carriage may be needed in order to move it to the correct side of the needle bed. These passes, where needles are deselected, are represented by a RC number and an empty "Yarns" window.

## Pattern text

The "Pattern text" Progress window applies to hand knitting only.

This window contains the Interactive Knitting instructions that are to be carried out for each row. As the work is advanced by pressing the space bar, Up arrow key, clicking the 'Next row' button or using the *Go / Next Row* menu option the instructions for each row are displayed.



In addition to being able to resize and move the "Pattern text" window, it has a few features to facilitate viewing and reading. The two Zoom buttons shown on the left can be clicked repeatedly to resize the text in the window so it is as large or small as required.

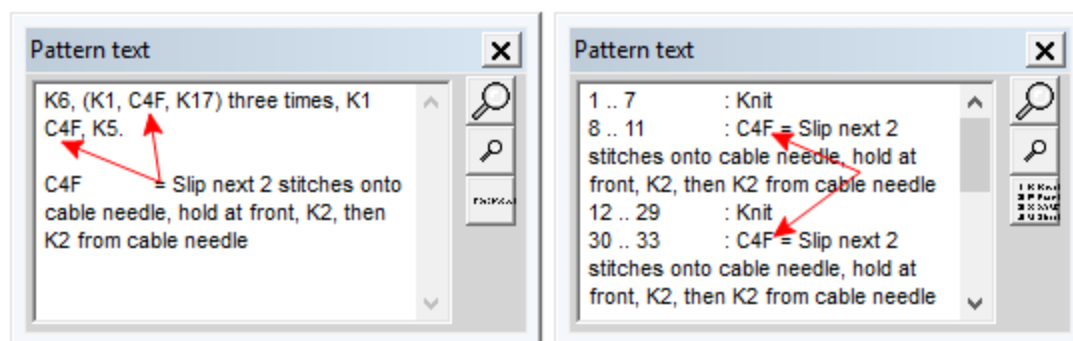
The lower button can be cycled through three states to show the information in different formats, as shown in the images on the left. The different views are of same row in the work.

Vertical list (1) displays the text in list view. The instructions are listed one after another and have to be read from the top down, whether this is a single instruction, such as "P6" or a grouped instruction, such as "(P8, P1tbl...)". Each instruction or group is on a separate line.

Left to right abbreviations (2) presents the instructions, whether single or in groups in a horizontal 'sentence', separated by commas and to be read from left to right.

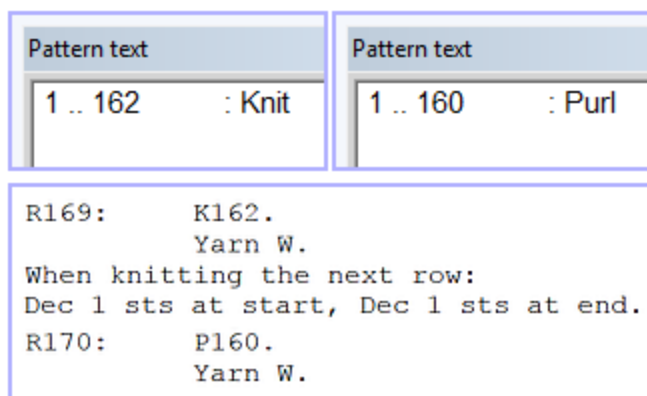
Full text (3) displays the instructions in full for each stitch or group of stitches. In this example, stitches 1 up to and including 14 have to be purled, which, although the notation is different, matches both Vertical and Left to right instructions, where 6 stitches have to be purled, then another 8. The scroll bar to the right of the "Pattern text" window (see red arrow) will most likely need to be used to read through all the instructions.

Whereas views (1) and (2) display how many stitches are to be worked, view (3) displays the actual numbers of the stitches. These can also be found in the "Chart" window ([See page 84](#)), which changes the numbers around as needed for working the right or wrong side of the knitting. The knitting direction can be seen in the "Piece Overview" window.



If there is a stitch cable in the design and the view has been set to Vertical list or Left to right abbreviations, the key to the cable abbreviation is shown once at the end of the instructions. If the Full text view is chosen, the full text for each cable will be displayed every time it occurs.

Both scenarios have been shown above. In the first case (Left to right abbreviations), the instructions are located at the bottom of the "Pattern text" window and may need to be scrolled to whenever they are needed, while in the second case (Full text) the pattern can be followed easily with all instructions repeated for each occurrence.

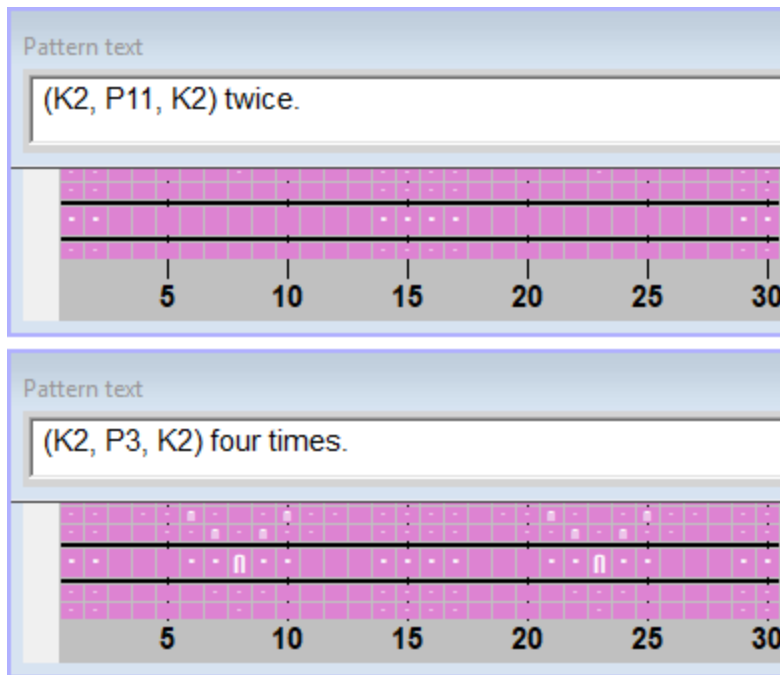


Unless there are Smart or Memo symbols in the swatch, shape-only or integrated garment piece, the pattern text will contain Knit or Purl instructions only from stitch 1 to the last stitch in the current row.

Shaping information is given in the "Countdown + Shaping Instructions" window and will only be reflected by a different number of stitches being shown from one row to the next. An example has been given of two consecutive rows where the number of stitches is different before and after decreases. The top two images are from Interactive Knitting and the information in the lower image has been taken from the Original Pattern

Drafting Garment text printout.

Colour information is shown in the "Yarns" ([See page 70](#)) and / or "Chart" window ([See page 84](#)) and not in the "Pattern text" Progress window, even if all used colors have been assigned Yarn symbols in Stitch Designer. The rows in this example contain one yarn ("W"), which is shown in the lower (Original Pattern Drafting) Pattern text but is absent from the Interactive Knitting "Pattern text", as demonstrated in the top two images.



Stitch symbols that have no abbreviations, such as Machine Knit symbols that might have been used in a Hand Knitting pattern, will not generate separate knitting instructions in the "Pattern text" window, as has been demonstrated in the images on the left, where the "Pattern text" window has been displayed over the relevant part of the "Chart" window.

Machine tuck symbols have been used in some of the rows. These do not have abbreviations in a Hand knitting method, so although they are displayed on the Chart, they do not count towards the total of the stitches in a row.

In this example, the row consists of 30 stitches and the pattern text instructions add up to these in the top image, where there are no tuck symbols. 2 Knit, 11 Purl, 2 Knit adds up to 15 stitches and performing the sequence twice makes 30. In the lower image however, there

are 2 Tuck symbols. 2 Knit, 3 Purl, 2 Knit adds up to 7 and performing this sequence four times makes 28.

Care needs to be taken as these symbols are not counted in the instructions so that if a stitch pattern is 30 stitches wide and contains 2 Tuck symbols on row 6, the instructions on row 1 would add up 30 stitches, but on row 6, the total of the stitches that are instructed would only add up to 28.

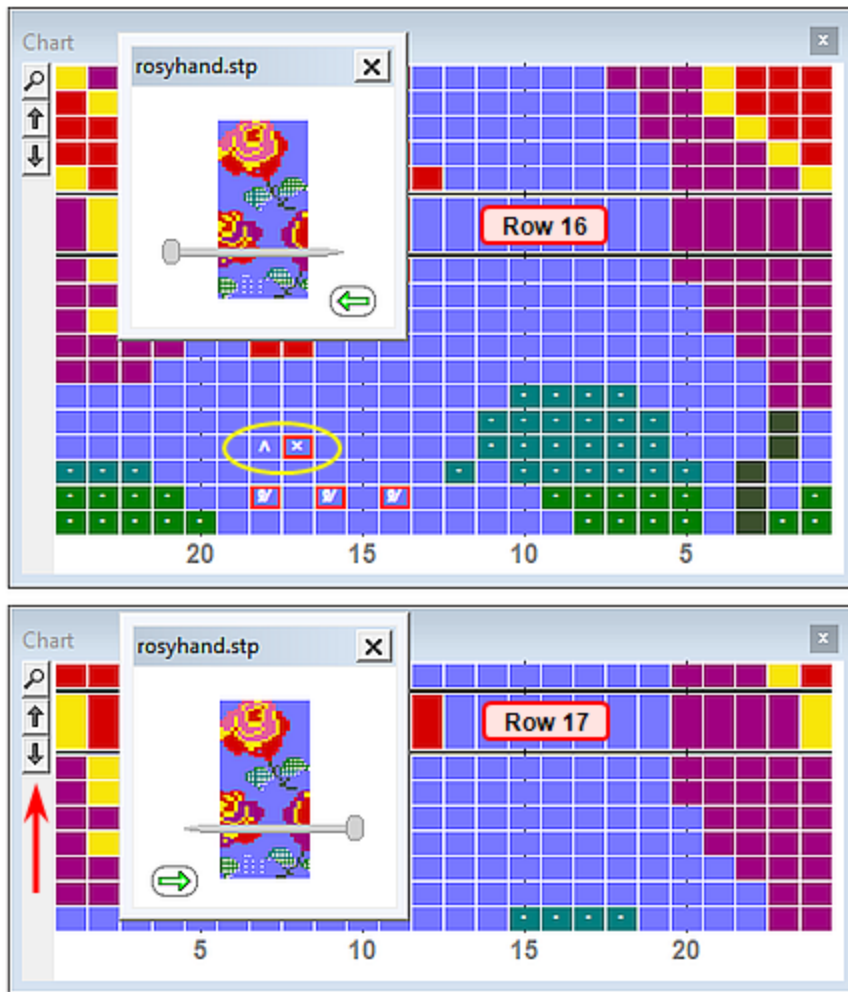
If required, abbreviations (and instructions) can be added in the Text Editor of the Symbols Organizer in Stitch Designer. More information can be found in the Stitch Designer manual.

## Chart

This Progress window applies to hand knitting. Its equivalent for machine knitting is the "Needle Bed" window ([See page 87](#)).

The "Chart" window provides a view of the current row of a swatch, shape-only or integrated garment piece with as many rows around it as will fit. It displays all the elements that have been saved with the work, including colors, Smart Symbols, Memo symbols and stitch cable information.

Memo and cable symbols indicate manual interventions to which attention can be drawn by setting Alerts ([See page 107](#)).



To illustrate some of the features as clearly as possible, a stitch pattern was chosen with two consecutive rows. The "Piece Overview" window was positioned over the "Chart" window.

Stitch numbers are shown along the bottom of the Chart in increments of 5 or 10, depending on the width of the pattern and Interactive Knitting screen. Numbers will ascend or descend in accordance with the knit direction. For Flat knitting this direction will switch at every row, while for Circular knitting it will stay the same throughout the work, in which case the actual knit direction will depend on whether the option "Knitting starts at left edge of row 1 on chart" was ticked in the method of knitting ([See page 113](#)).

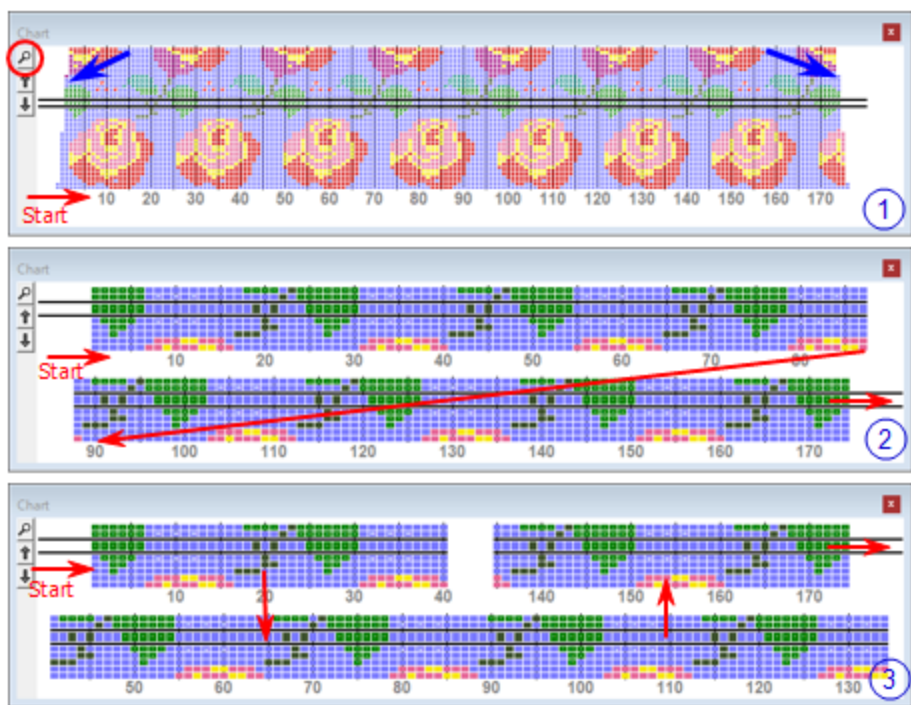
The numbering can easily be seen in the images on the left. The top image shows the knit direction of row 16, which is from right to left. The sequence of the stitch numbers is reversed for row 17 in the lower image.

Although the physical work will be turned for each row so that the right and wrong side of the knitting faces the knitter alternately, the image of the pattern in "Chart", "Yarns" and "Piece Overview" windows does not change. Care needs to be taken to read the pattern from left to right or vice versa according to the knit direction.

The "Chart" window can be resized to show more or fewer rows of the pattern in order to gain a good overview of the work. The top image shows more rows than the bottom image because it has been sized differently.

It is easy to recognize the current row as its stitch cells are elongated and the row is held between two thick black lines. The '**Row Up**' and '**Row Down**' buttons on the left hand side below the Zoom button (see red arrow above) can be used to position the current row higher or lower in the window. In the top image there are more rows visible above the current row than the bottom row, although the pattern rows are consecutive, due to clicking the 'Row Up' button repeatedly. These buttons are purely for manipulating the view in this window and do not advance the pattern.

If there are Memo symbols in the pattern and the Stitch symbol alert has been activated ([See page 107](#)), they will show up with a thick border in a contrasting color in the "Chart" window and will sound an alert when this row is reached, provided an Alert has been set and activated for this symbol in Stitch Designer and the Windows sound scheme allows it. In the top image of the example above, some symbols have been highlighted, while another (see yellow oval) has not. This is because this symbol's alert, although set in Stitch Designer, has not been activated there. Smart Symbols, such as Knit, Purl, Tuck or Weave do not generate alerts. More information about stitch symbol alerts can be found in the Stitch Designer manual in the "Palettes" topic.

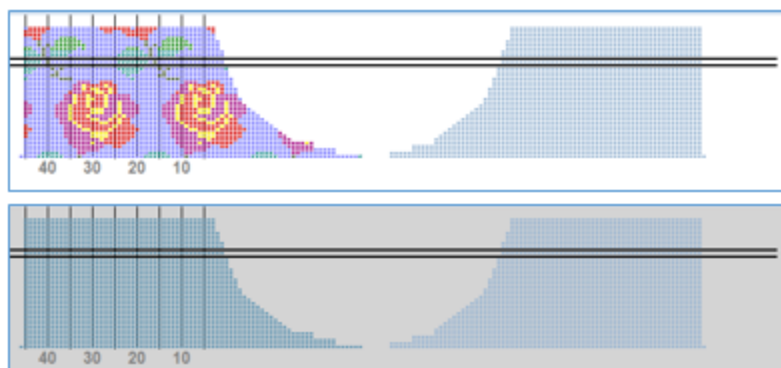


The Zoom button at the top left of the "Chart" window (see red circle) can be clicked to cycle through three different views of swatch, shape-only or integrated garment piece. An integrated garment piece has been selected for the example on the left. The top image shows the normal view where the entire width of the garment piece is shown. If the visible part of the pattern in the "Chart" window contains shaping, this will be visible in the outline (see blue arrows). The current row is easily identified by the two thick black lines that border it and the stitch numbering can be seen clearly. However, the more stitches a garment piece contains, the less detail can be seen.

In the second image, the pattern has been split over two sections that are shown below each other and in the third image three sections are displayed.

Each section needs to be worked in turn in the direction of the knitting to complete one row of knitting, by following the stitch numbers. The same row of knitting was used for these images, and the knit direction is therefore the same for all, but for the next row, the stitch numbers would be reversed as explained at the start of this chapter. The way the pattern needs to be followed has been illustrated by red arrows and always starts at the lowest stitch number.

The view can be zoomed in even further by using the *Window / Floating Windows* menu option to free the window from the constraints of the DesignaKnit screen and enlarge it further.



If a garment piece is knitted in more than one section, such as for a shoulder part, the "Chart" window displays the inactive section paler than the current one, as can be seen on the left for both an integrated garment piece and a Shape-only.

## Needle Bed

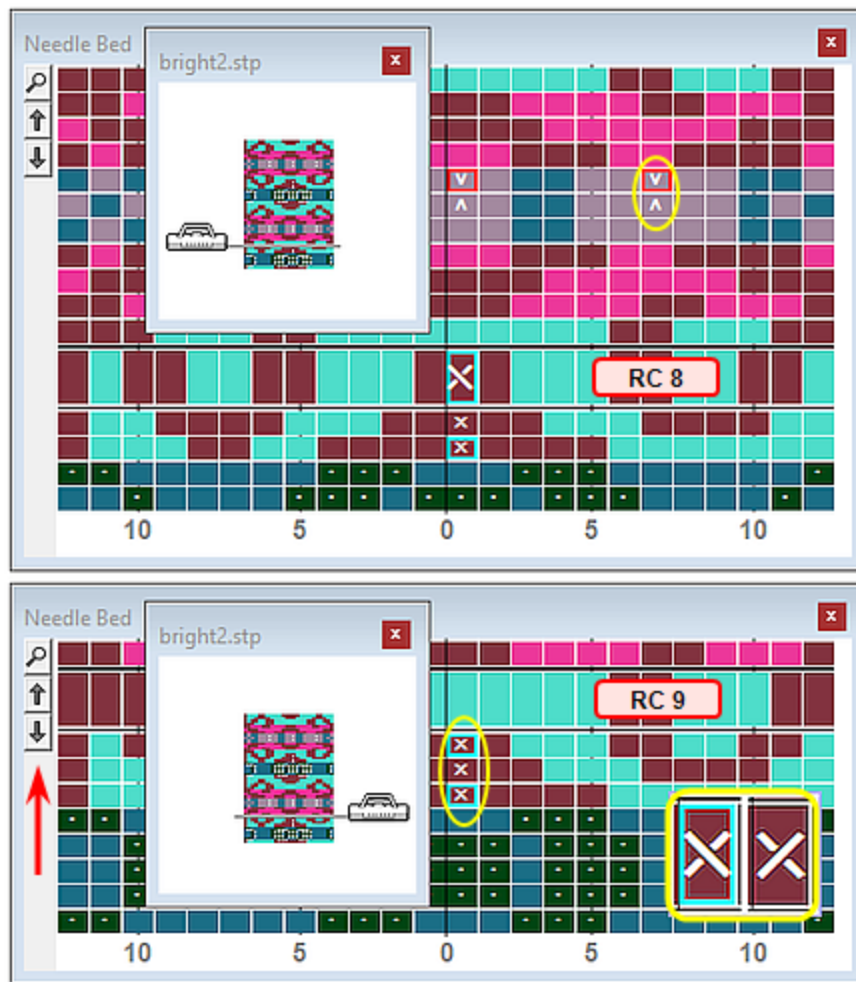
This Progress window applies to machine knitting. Its equivalent for hand knitting is the "Chart" window ([See page 84](#)).

The "Needle Bed" window provides a view of the row that is about to be knitted of a swatch, shape-only or integrated garment piece with as many rows around it as will fit. It displays all the elements that have been saved with the work, including colors, Smart Symbols, Memo symbols and stitch cable information.

In Stitch Designer, stitch patterns are drawn with the effect side (right side or outside) of the fabric facing the user on the screen. On downloading to a knitting machine DesignaKnit will automatically flip the pattern from left to right if this is required, so that the physical needle bed and view of the "Needle Bed" Progress window match. Whether the stitch pattern in Interactive Knitting is shown in the same way as in Stitch Designer or reversed from left to right depends on the combination of knitting machine and knitting method. The reversed pattern appears in Interactive Knitting for all stitch patterns except hand knitting patterns or where the Right Side facing texture method is used.

In all cases, DesignaKnit will ensure that the pattern ends up in the correct way to be worked and that the "Needle Bed" view matches the physical needle bed as it is faced during knitting.

Memo and cable symbols indicate manual interventions to which attention can be drawn by setting Alerts ([See page 107](#)).



To illustrate some of the features as clearly as possible, a stitch pattern was chosen with two consecutive rows. The "Piece Overview" window was positioned over the "Needle Bed" window.

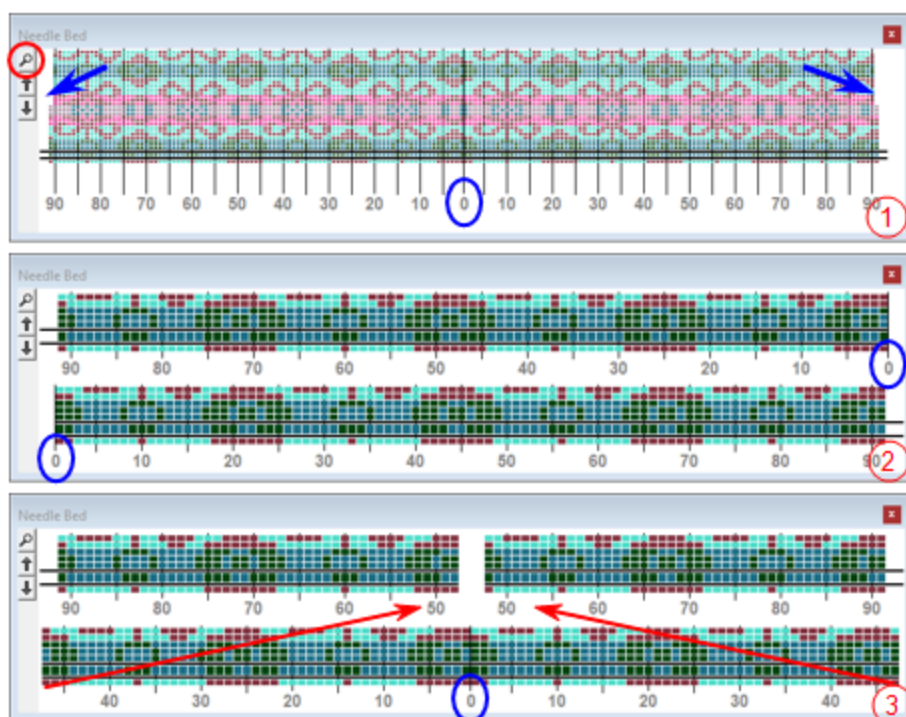
Needle numbers are shown along the bottom of the "Needle Bed" window in increments of 5 or 10, depending on the width of the pattern and Interactive Knitting screen. Shape-only pieces and stitch patterns that are knitted on their own (swatches or Cut and Sew pieces) are always positioned over the center of the needle bed. Integrated garment pieces are positioned in such a way that the center of the garment piece is at the center of the needle bed, while the stitch pattern is shuffled to accommodate this ([See on page 166](#)). The needle (stitch) numbers increment to both sides outwards from the center.

The "Needle Bed" window can be resized to show more or fewer rows of the pattern in order to gain a good overview of the work. The top image shows more rows than the bottom image because it has been sized differ-

ently.

It is easy to recognize the current row as its stitch cells are elongated and the row is held between two thick black lines. The '**Row Up**' and '**Row Down**' buttons on the left hand side below the Zoom button (see red arrow) can be used to position the current row higher or lower in the window. In the top image there are more rows visible above the current row than in the bottom image, even though the pattern rows are consecutive. This is due to clicking the 'Row Up' button repeatedly. These buttons are purely for manipulating the view in this window. Clicking either of them does not advance the pattern or interrupt the connection with the knitting machine.

If there are Memo symbols in the pattern and the Stitch symbol alert has been activated in Interactive Knitting ([See page 107](#)), they will show up with a thick border in a contrasting color in the "Needle Bed" window, such as red or light blue in this example. They will sound an alert when the row is reached, provided an Alert has been set and activated in Stitch Designer and the Windows sound scheme allows it. In the images above, some symbols have been highlighted, while others (see yellow ovals) have not. This is because the alerts for these symbols, although set in Stitch Designer, have not been activated there. Although the Stitch symbols in the lower image appear to be the same, they are two different cross over symbols, as can be seen in the inset picture at the bottom. Smart Symbols, such as Knit, Purl, Tuck, Weave or Lace symbols do not generate alerts. More information about stitch symbol alerts can be found in the Stitch Designer manual in the "Palettes" chapter.

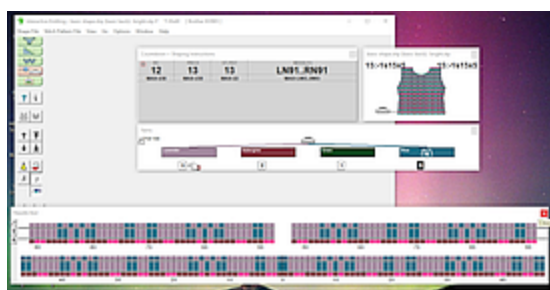


The Zoom button at the top left of the "Needle Bed" window (see red circle) can be clicked to cycle through three different views of the swatch, shape-only or integrated garment piece. An integrated garment piece has been selected for the example on the left. The top image shows the normal view where the entire width of the garment piece is shown. If the visible part of the pattern in the "Needle Bed" window contains shaping, this will be visible in the outline (see blue arrows). As shaping enters the work, the number of needles will vary.

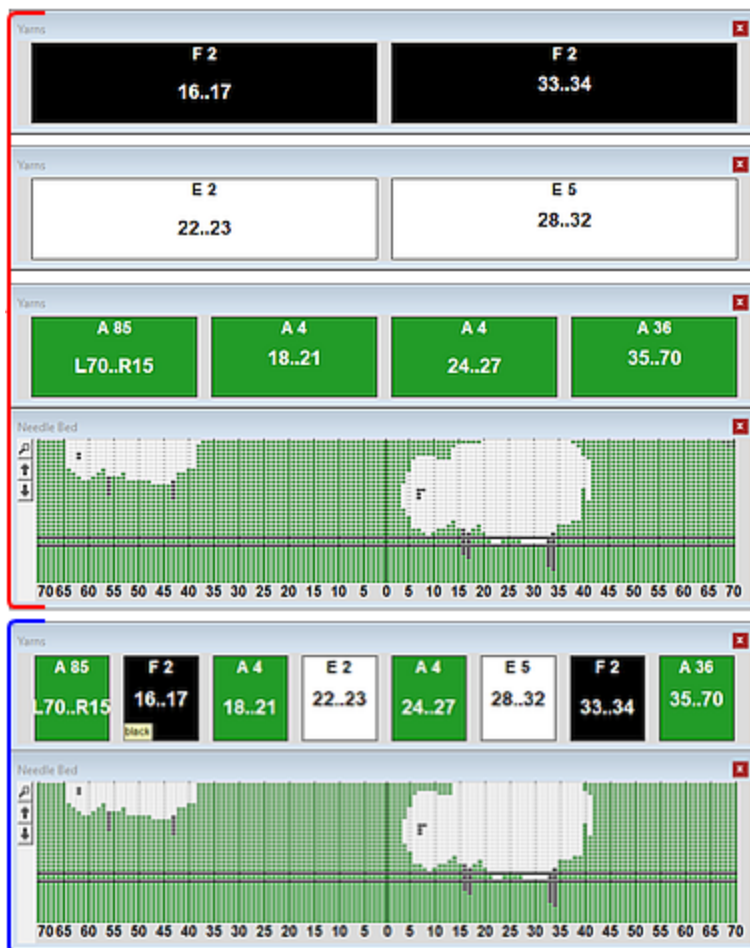
The current row is identified by the two thick black lines that border it and the needle numbering can be seen clearly. However, the more

stitches a garment piece contains, the less detail can be seen.

In the second image, the pattern has been split over two sections that are shown below each other with the left section of the needle bed at the top and the right section at the bottom of the window. In the third image three sections are displayed, forming a staggered view of the rows with the center of the needle bed in the middle of the window. All the sections together form the view of one row about to be knitted. The "0" point marks the center of the needle bed in all views (see blue ovals).



The view can be zoomed in even further by using the *Window / Floating Windows* menu option to free the window from the constraints of the DesignaKnit screen and enlarge it further by clicking, holding and dragging its edges, as has been done in the image on the left where the Needle bed has been enlarged to span the width of the computer screen. *Window / Floating Windows* or *Window / Tile Arrangement* can be used to quickly restore the windows into positions within the DesignaKnit program screen.



For Intarsia patterns, the "Needle Bed" window needs to be viewed together with the "Yarns" window. The highlight stays on the active row until its colors have been worked. The "Yarns" window shows which needles the colors need to be laid over.

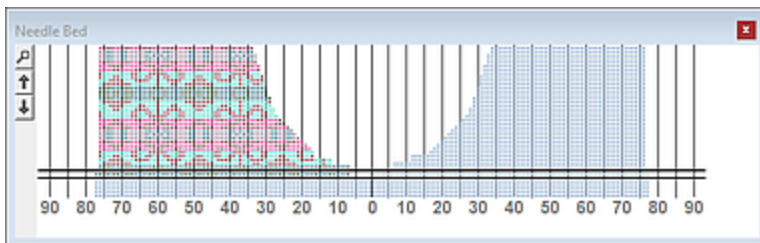
In the example on the left, the top images (encased in the red bracket) are those where an AG50 Intarsia carriage was used. The highlight stays on the same row of the belly of the sheep until green has been laid over Left needle numbers 40 up to and including Right needle 15, (Right) needle 18 up to and including 21, 24 up to and including 27 and finally 35 up to and including 70, after which the carriage is passed across. The white and then black yarn are treated in the same way. Care needs to be taken to cross the yarns at the point where one finishes and another starts in order to interlock the yarns and avoid gaps in the finished fabric. The pattern row, and therefore the row in the "Needle Bed" window advances only when all row colors have been worked.

The lower images (encased in the blue bracket) show how Intarsia is displayed for a normal or non-electronic Intarsia carriage. The yarns are laid across the needles, after which the carriage

is passed across. All the colors for one pattern row are shown together and RC and pattern row advance at the same time.

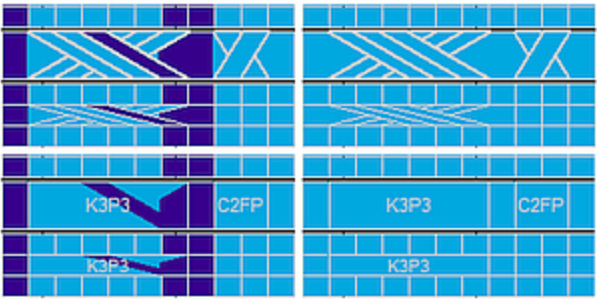
The "Needle Bed" window looks identical in both scenarios.

Intarsia patterns can only be downloaded to Silver Reed knitting machines with the AG50 Intarsia carriage, thereby causing the correct needles to be brought forward automatically rather than having to do this manually.



If a garment piece is knitted in more than one section, such as for a shoulder part, the "Needle Bed" window displays the inactive section paler than the current one, as can be seen on the left for an integrated garment piece. A Shape-only piece will display the inactive section as paler too, although the difference in color will not be quite so obvious.

The "Chart" and "Needle Bed" windows always show the swatch, shape-only or integrated garment piece in the same way, using stitch numbering and Knit direction arrows to guide the knitter to read the pattern correctly.



If stitch cables are involved in the work they will be shown in the "Chart" or "Needle Bed" window with the cable representation that was selected in the Cables Palette in Stitch Designer. In the examples on the left both the graphic and abbreviation mode have been shown in a two color and plain pattern.

For machine knitting, Stitch cables involve manually crossing yarns on the needles that are indicated by DesignaKnit. For knitting machines that preselect needles (such as Brother), the needles that are involved in each cable crossing will be brought forward by the carriage as it knits the previous row. For other machines (such as Silver Reed, Creative etc.), the "Needle Bed" window needs to be consulted to see which needles are involved in the cable crossing.

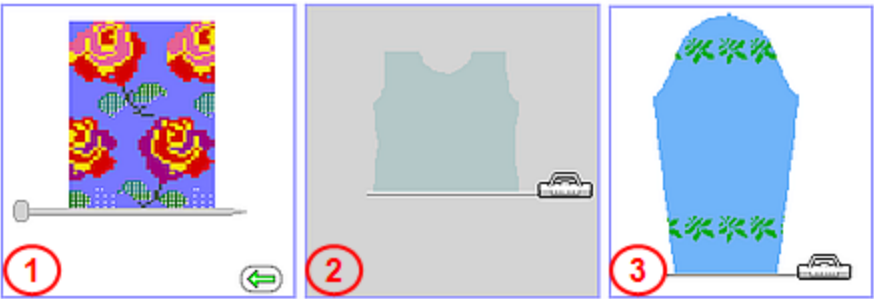
For hand knitting, "Chart" and "Pattern text" (See page 82) windows should be viewed together, as the "Pattern text" displays the instructions so they can be followed without thinking about knitting direction, while the "Chart" window provides an excellent preview of the piece on the right side of the work. When Flat knitting is used, DesignaKnit checks that the cable crossings are on right side rows. If the setting for row 1 is subsequently changed to the opposite side, the stitch cables will be on the wrong row, unless the method is also changed to Circular knitting.

An Alert will sound on every row that a cable occurs. To avoid this, the Alert sound can be set to "None" for each cable that occurs in the stitch pattern in the Cables Palette in Stitch Designer. Alternatively, the Stitch symbol Alert (See page 107) can be switched to off, but this will stop alerts for all memo symbols, not just stitch cables.

Piece Overview

Hand Knitting .....	92
Machine Knitting .....	94

The "Piece Overview" window displays an image of the complete work, whether this is a swatch, shape-only or integrated garment piece. The image size is adjusted to fit in the window, which can be resized to enlarge the image or make it smaller.

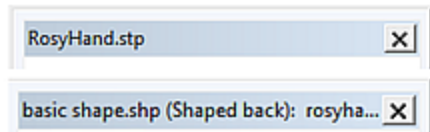


A few examples have been shown on the left of different views. Image (1) shows a stitch pattern on its own, as can be gathered from the rectangular shape. Image (2) shows a shape file piece as a Shape-only, a gray blue shape against a gray background. Image (3) displays a different shape file piece with an integrated stitch pattern.

While image (1) uses a Hand Knit method, the other two are Machine Knit, which is immediately obvious by the knitting needle and knitting machine carriage that are shown.

The background color of the "Piece Overview" window is the color that is defined for the stitch pattern and can be changed in Stitch Designer by using Options / Colour Scheme / Screen Background. If there is no stitch pattern involved, such as when a Shape-only is used (image 2) the background of the window will be gray, while the

piece itself is shown as gray blue. More information on the Colour Scheme can be found in the Stitch Designer manual.

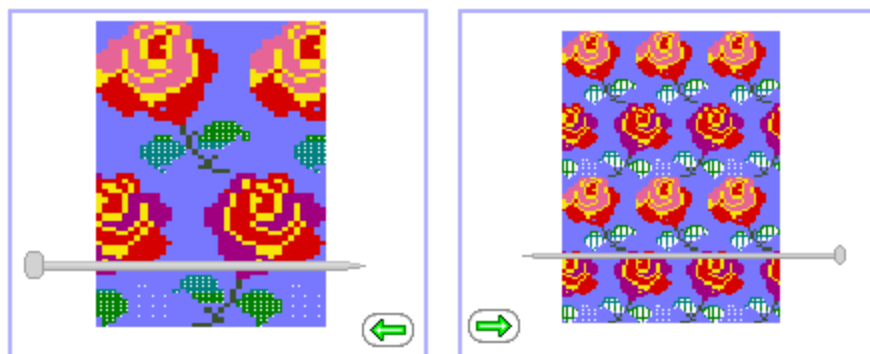


The title bar of the window displays the name of the stitch pattern or, if a garment piece is used, the file name and piece that was used. A couple of examples have been shown on the left. If a Shape-only is being knitted, only its file name will be displayed and if an integrated garment piece is worked, as much of the stitch pattern name as fits in the title bar will also be shown. Resizing the window will display more or less information.



The Stitch Designer pattern is flipped horizontally in Interactive Knitting for all methods except Hand knit and Right side facing texture, because the wrong side of the fabric faces the knitter with the other methods. The first image shown on the left is taken from Stitch Designer (without grid lines) and the second from the "Piece Overview" Progress window in Interactive Knitting.

## Hand Knitting



When a stitch pattern is chosen for Interactive Knitting, the "Piece Overview" window shows an overview of the entire swatch, resizing the image as necessary, as shown on the left.

All colors and stitch symbols (if used) are displayed, although the window may have to be resized to see the symbols more clearly.

The knitting needle is shown as a

visual reminder of how the work is advancing and the green Knit direction arrow shows in which direction knitting takes place. Advancing a row by pressing the space bar, Up arrow key, clicking the 'Next row' button or using the *Go / Next row* menu option moves the knitting needle up and switches the knitting direction, moving the green arrow to the other side. The stitch numbering in the Chart ([See page 84](#)) window changes at the same time to indicate the direction in which the pattern is read.

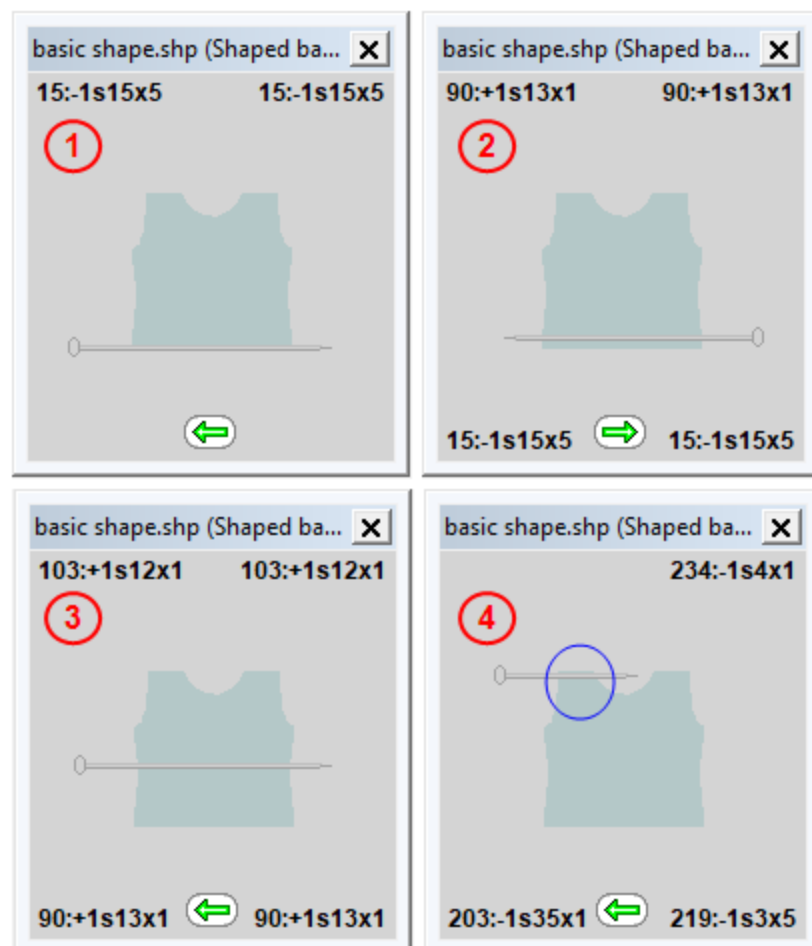
The first stitch of a row is the one nearest the point of the needle and shows which way the pattern Chart instructions are read. Although the image of the stitch pattern stays the same in the "Piece Overview" window, the needle will change direction on every row, according to the method that is chosen for Flat knitting. For Circular knitting it will keep facing the same way on every 'row'.



When an integrated garment piece is knitted in sections, the knitting needle will stretch across the part that is currently being knitted.

In the first image on the left the needle is at the start of the work, in the second image at the end of the

first section. Advancing one more row from here places the needle at the start of the next section, as can be seen in the third image.



As soon as there is shaping in a piece, shaping instructions will be shown in the "Piece Overview" window. The instructions are derived from the shaping of the garment piece as it was designed in Original Pattern Drafting or Standard Garment Styling. They follow a format that is known as Japanese notation and although this is primarily devised for machine knitting, it can also be helpful when viewing a hand knitted piece.

A more detailed description of this can be found in the "Printing" section of the manual ([See on page 142](#)) but, in short, the format shows the row number where the action is to take place, the type of shaping (increase or decrease), number of stitches involved, number of rows to be knitted between shaping rows (referring to the side where the shaping needs to take place) and finally, the number of repeats of this sequence.

The images on the left show a Shape-only garment piece. The same instructions will be present on an integrated garment piece, but not if a stitch pattern only (swatch) is knitted.

The information is displayed at the relevant side of the piece, with the future instructions

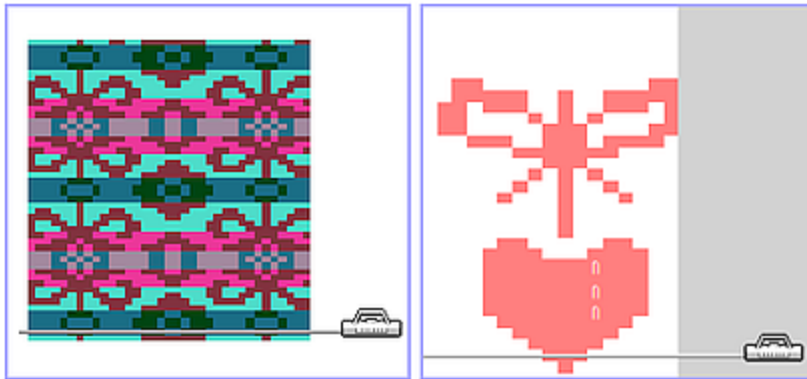
at the top of the window. As soon as the "Countdown + Shaping Instructions" window has counted down to the row where action needs to take place, the now current set of instructions moves to the bottom of the image and the next future instructions will appear at the top.

Image (1) shows that the first shaping needs to take place at Row number 15, where 1 stitch needs to be decreased at both sides of the work, after which 15 rows need to be knitted without further shaping. This sequence has to be repeated 5 times. The instructions are identical on left and right side of the garment piece.

When row 15 is reached, these instructions become current and move to the bottom of the window, while the next set is displayed at the top. This can be seen in image (2). The "15:-1s15x5" instruction set is operative and the next set is to start at Row 90. This is the situation in image (3), where a fresh set is to be started at Row 103.

Image (4) shows how the instructions can be different for each side of the piece and are shown at the relevant side. The current instructions for the left shoulder section (see blue oval) are to decrease 1 stitch, then work 35 rows once on the left side, while for the right side of the same section the instructions started from Row 219, decreasing 1 stitch, knitting 3 rows without changes, five times. The next instructions will come into effect at Row 234, where only the right side of the section has shaping instructions, while the left is knitted straight.

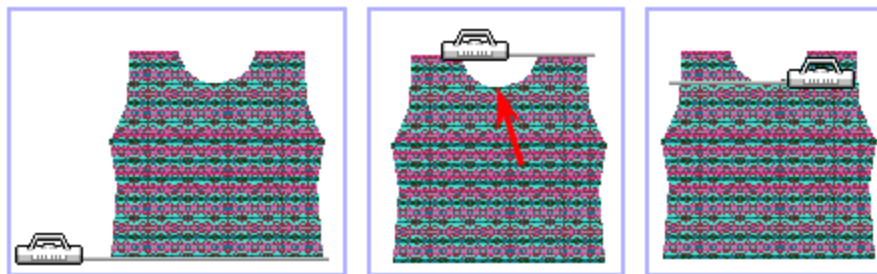
## Machine Knitting



When a stitch pattern is chosen for Interactive Knitting, the "Piece Overview" window shows an overview of the entire swatch, resizing the image as necessary to fit all of it in, as shown on the left, where the first image is of a 23 stitches by 22 rows stitch pattern that has been given a swatch size of 35 stitches by 50 rows, thereby repeating itself until it fills the swatch. All colors and stitch symbols (if used) are displayed, although the window may have to be resized to see the symbols clearly,

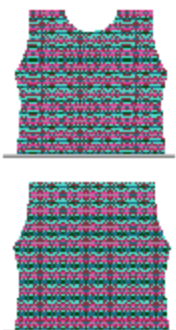
which has been done in the second image where the "Piece Overview" window was enlarged, so that part of a (different) stitch pattern could be shown with visible stitch symbols.

The knitting machine carriage is shown as a visual reminder of which side of the physical needle bed it is on and how the work is advancing.



When an integrated garment piece is knitted in sections, the carriage symbol is shown as spanning the section that is being worked. At the start of the work, the carriage symbol stretches across the entire piece, as shown in the first image on the left. In the second image, the carriage is shown only across one shoulder, and

is at the end of the first section. Advancing the knitting one more row places the carriage symbol at the bottom of the second section and stretching only across that part. Interactive Knitting provides instructions to hold or cast off stitches at the point where the work needs to be divided to create the neckline (see red arrow). More instructions are provided when the first section is completed and the second section started and completed, sounding alerts according to the way they have been set and configured ([See on page 107](#)).



If a garment piece is integrated with a Jacquard stitch pattern, it can only be knitted in one piece and the reminder shown on the right is presented.

This affects the shaping only where the piece would normally be divided into sections to be knitted, such as a neckline, as can be seen in the images.

The top image on the left is a garment piece with a Fair Isle stitch pattern, while the lower image has a Jacquard stitch pattern.



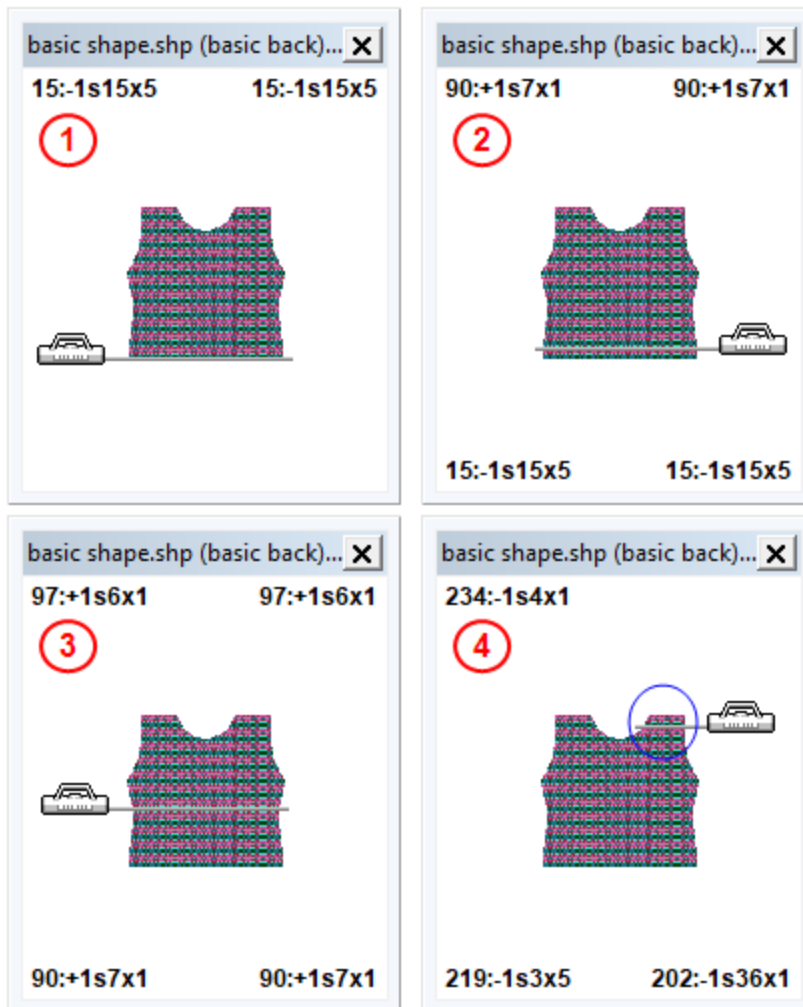
**REMINDER:** Because you are knitting Jacquard, the pattern piece will be knitted in a single section.

You should proceed only if you have integrated the piece with a pattern made using the Cut and Sew option from the Stitch Designer Shapes menu.

OK to proceed?

Garment pieces that use Fair Isle, Intarsia or Right / Wrong side facing texture stitch patterns can all be knitted

in sections.



As soon as there is shaping in a piece, shaping instructions will be shown in the "Piece Overview" window. The instructions are derived from the shaping of the garment piece as it was designed in Original Pattern Drafting or Standard Garment Styling. They follow a format that is known as Japanese notation.

A more detailed description of this can be found in the "Printing" section of the manual ([See on page 142](#)) but, in short, the format shows the RC (Row Count) number where the action is to take place, the type of shaping (increase or decrease), number of stitches involved, number of rows to be knitted between shaping rows (referring to the side where the shaping needs to take place) and finally, the number of repeats of this sequence.

The images on the left show an integrated garment piece in order to illustrate the shaping instructions. The same instructions will be present on a Shape-only piece, but not if a stitch pattern only (swatch) is knitted.

The information is displayed at the relevant side of the piece, with the future instructions at the top of the window. As soon as the "Countdown + Shaping Instructions"

window has counted down to the row where action needs to take place, the now current set of instructions moves to the bottom of the window and the next future instructions will appear at the top.

Image (1) shows that the first shaping needs to take place at RC 15, where 1 stitch needs to be decreased at both sides of the work, after which 15 rows need to be worked without further shaping. This sequence has to be repeated 5 times. The instructions are identical on left and right side of the garment piece.

When RC 15 is reached, these instructions become current and move to the bottom of the window, while the next set is displayed at the top. This can be seen in image (2). The "15:-1s15x5" instruction set is operative and the next set is to start at RC 90. This is the situation in image (3), where a fresh set is to be started at RC 97.

Image (4) shows how the instructions can be different for each side of the piece and are shown at the relevant side. The current instructions for the right shoulder section (see blue oval) are to decrease 1 stitch, then work 36 passes of the carriage once on the right side at RC 202. For the left side of the same section the instructions start from RC 219, decreasing 1 stitch, working 3 passes of the carriage and repeating this sequence five times, which is when RC 234 will be reached. The next instruction set at RC 234 applies to the left side of the section only.

The appearance of the Lace carriage will change if the stitch pattern is created by using the Lace tool ([click here](#)).

# Pieces

<b>Swatch</b> .....	<b>96</b>
<b>Shape-only</b> .....	<b>99</b>
<b>Integrated Garment Piece</b> .....	<b>101</b>
<b>View Info</b> .....	<b>102</b>

A swatch is a stitch pattern that is knitted to a certain size. A garment piece can be knitted as a Shape-only or integrated with a stitch pattern if one has been applied in Original Pattern Drafting or Stitch Designer. Each of these has different properties which need to be taken into account.

Changes with regards to knitting method and machine can be made very easily in the *Options* menu, and any change will be reflected in the DesignaKnit title bar. However, care needs to be taken as these changes will be applied and saved with the piece without prompting or warning, unless the combination of method of knitting and piece to be knitted are incompatible, in which case a warning will appear. It is often better to make these changes in Stitch Designer where the pattern can be previewed and any errors and incompatibilities checked and corrected to ensure smooth knitting. It can, however, be a good way to do a test run with different options to see how color changes etc. will be affected, after which the piece needs to be set back to its original method.



Changing the method of knitting in Interactive Knitting, say from Fair Isle to Jacquard, Stocking stitch to Garter or from Machine knitting to Hand knitting, will apply the changes immediately. This will change the positioning of stitch pattern and garment piece relative to each other.

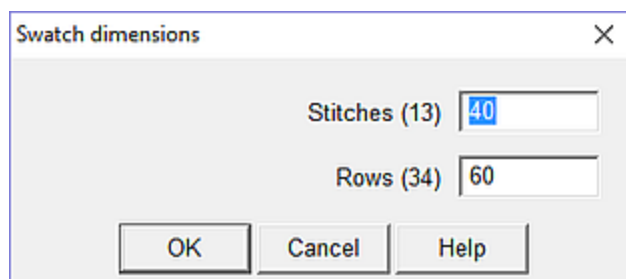
## Swatch

Knitting a stitch pattern on its own as a swatch can be done for different reasons:

- As a means to determine the correct tension settings ([See on page 203](#)). A swatch is knitted by using the stitch pattern in order to gauge the overall tension of the knitted garment pieces, using all of its colors and / or texture stitches. In order to arrive at a swatch that can be measured accurately for tensions it is advisable to knit a number of rows with waste yarn first, then the stitch pattern, followed by another band of waste yarn. After finishing and treating the swatch in the normal way (e.g., washing, drying, ironing), the required number of stitches and rows can be measured in inches or centimeters as needed, and the resulting values can be entered in the "Tensions" dialog, accessed through *Options / Tensions* in Original Pattern Drafting, Standard Garment Styling or Stitch Designer, as appropriate, which will ensure accurate results when knitting. Care should be taken with entering tension information in Interactive Knitting ([See page 37](#)). This information is also used to calculate the amount of yarn of the different colors needed to complete the garment ([See on page 158](#)).
- If the knitting project does not contain any shaping instructions, such as when garments are created using only rectangular pieces. In this case, the overall size of each rectangle has to be entered in rows and stitches.
- If Memo symbols, rather than Smart Symbols have been used to create shaping instructions, in which case shaping instructions would not be prompted for in the "Countdown + Shaping Instructions" window. This may be the case for a piece that is created by using AutoChart. More information can be found in the Stitch Designer manual.

- If a pattern has been produced by using Cut and Sew, the stitch pattern is the same as the complete garment piece and only one pattern repeat needs to be knitted. Shaping is done by cutting away the excess fabric after knitting and overlocking the raw edges. More information can be found in the "Cut and Sew" section in the Stitch Designer manual.
- If a test of what happens in the stitch pattern is needed before actually knitting a garment piece. E.g., if there are difficult color changes in the stitch pattern, it may be informative to 'test' these by knitting a swatch of one or more repeats of a stitch pattern, or previewing the process on screen.

A stitch pattern needs to be opened ([See page 39](#)), after which the "Swatch dimensions" window, as shown below, is presented. The numbers in brackets represent the actual size of one repeat of the current stitch pattern. The values in the entry boxes may be changed at any time by using the *Stitch Pattern File / Swatch Size* menu option.



As the DesignaKnit tension dialogs work with 40 stitches by 60 rows, it may be easiest to enter those values when a tension swatch is needed, although any other numbers are accepted, taking certain considerations into account (see Warnings and Informational messages below), up to the limit of the knitting machine.

Any horizontal and vertical sizes can be entered and as many repeats as will fit into the swatch will be knitted, ending with a partial repeat if this is necessary to fill the

number of stipulated rows.

The number of rows that is entered for Fair Isle, Intarsia and Right / Wrong side facing texture patterns is the same as the number of carriage passes. The number of rows that is entered for Jacquard patterns will result in as many passes of the carriage (RC) as are needed to complete the stipulated number of pattern rows.

If the stitch pattern is larger than the stipulated swatch size, only part of it, starting from row 1, will be displayed and knitted. If the swatch is larger than the stitch pattern, as many repeats as are necessary are displayed, starting from row 1. The stitch pattern is positioned at the center of the needle bed for machine knitting whatever the swatch size.

If a Cut and Sew stitch pattern is used, the values of the stitches and rows in brackets should be used to ensure that only one full repeat of the pattern will be knitted.

Changing the Method of Knitting for stitch patterns (whether opened as a swatch or in an integrated garment piece) that have a user-defined arrangement of Yarn Numbers & Feeders, the current color sequence will be abandoned in favor of the default sequence that is suitable for the new knit method, and which will be recalculated from scratch.

If stitch cables are involved in the (hand knit) pattern, care needs to be taken because cable crossings are on right side rows in Flat knitting. Changing the setting for row 1 to the opposite side will cause the cable crossing to be on the wrong side of the fabric, unless the method is also changed to Circular. Major adjustments such as this should be made in Stitch Designer where the necessary checks and adjustments can be performed.

**Warnings and Informational messages** - When knitting a swatch or stitch pattern only, there are certain things that need to be taken into account. If it is not possible to knit the intended pattern or its size, appropriate warnings such as the following will be displayed. Different scenarios will present different error or information windows, with suggestions for how to deal with each particular situation. A few examples have been shown below.

Because the work is turned at the end of every row for hand knitting so that right and wrong side of the fabric face the user alternately, the instructions for odd and even rows are for different sides of the work. Each stitch pattern row must occur on the correct side of the work it is assigned to. To keep the Interactive Knitting pattern instructions straight, all odd rows must occur on the right side of the work, making all even rows appear on the wrong side. This is achieved by ensuring the stitch pattern contains an even number of rows.



Interactive Knitting can't be done for a hand knit pattern having an odd number of rows and requiring more than one vertical repeat. One way to convert the pattern to even rows is to use Stitch Designer's option to Redefine as two vertical repeats.

A different knitting machine could be selected in *Options / Knitting Machine* or *Options / Method of Knitting* while the swatch is displayed and Interactive Knitting will adjust its instructions where necessary. If the selected machine is incompatible a warning message, such as shown here will be presented. If this is the case, either a different, compatible shape or stitch pattern file has to be chosen or the "Esc" key can be pressed, which leaves the Interactive Knitting screen blank, allowing *Options / Knitting Machine* to be accessed from which a compatible knitting machine can be chosen. Subsequently clicking anywhere on the blank screen will bring back the "Interactive Knitting" dialog from which a shape or stitch pattern file has to be chosen.



This stitch pattern has a knitting method which is incompatible with the selected machine.

Jacquard stitch patterns must have an even number of rows in order for DesignaKnit to separate the colors correctly, as each yarn color is knitted for at least two passes of the carriage. Lace patterns will also be separated into multiple carriage passes, except for the Brother KH970, for which there can be a choice ([See page 257](#)).



The stitch pattern C:\Users\Marion\Documents\DesignaKnit 9\Stitch patterns\Tryouts\snowflake.stp has an odd number of rows. Please adjust to an even number of rows for Jacquard or Machine Lace.

Different informational messages may appear as needed, such as the messages shown here. The top message informs that the carriage is at the wrong side for the pattern and the bottom image warns that there are only yarn colors in the Right / Wrong side facing texture pattern. The user is informed of the actions that can be taken.



C:\Users\Marion\Documents\DesignaKnit 9\Stitch patterns\Tryouts\lacetest.stp  
This pattern requires the lace carriage to be at the right.

This is because of the following setup:  
In Method of Knitting, Use of colour changer is OFF.  
In KM Setup, Start with CAL is OFF.

(If the lace carriage is required to start at the left, either change the setup, or use Modify / Shuffle to move the pattern up or down one row.)



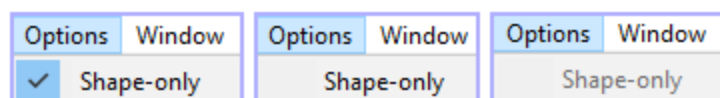
This texture pattern contains no pattern of symbols, only of yarn colours. It will therefore not produce any needle selection. For texture knitting, please use the smart symbols that select or deselect needles (see Symbols Organizer, and Palettes / Convert Yarn Colour).

After selecting the stitch pattern, entering the desired size and sorting any error or informational messages, the stitch pattern is displayed, after which knitting can be started for hand knitting ([See page 40](#)) or machine knitting ([See page 46](#)).

Working with a swatch can easily be recognized in the Interactive Knitting screen because of the rectangular shape of the stitch pattern in the "Piece Overview" Progress window, as well as the number of stitches, which will generally be a lot less than for a garment piece. All the different windows are explained in detail in Progress Windows ([See page 64](#)).

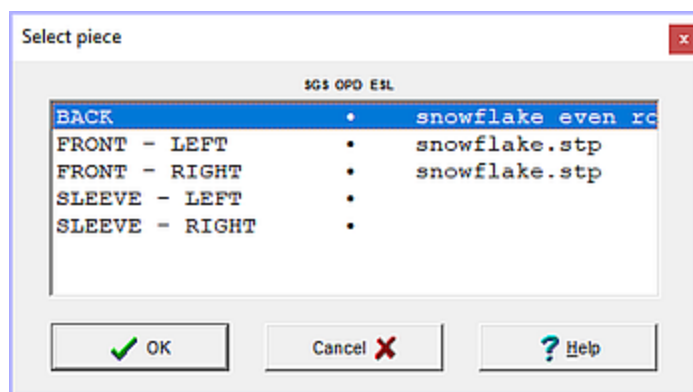
## Shape-only

Shape-only knitting can be selected if a garment is to be knitted in only one color and without any texture stitches. The Shape-only option hides all stitch pattern information, leaving only the shaping instructions. It can be used to simplify a garment, maybe knitting it for size or as a Preview in Interactive Knitting to see how the shaping instructions will work out, before reapplying the stitch pattern information.



The "Shape-only" option is grayed out for stitch patterns as these, by their nature, contain colors, stitch symbols or both and do not have any shaping instructions as they are rectangular or square. The

option is available for garment pieces whether they are integrated with a stitch pattern or not. If a garment piece was designed in Standard Garment Styling or in Original Pattern Drafting without applying a stitch pattern, it will contain only the background color and will therefore be a Shape-only.

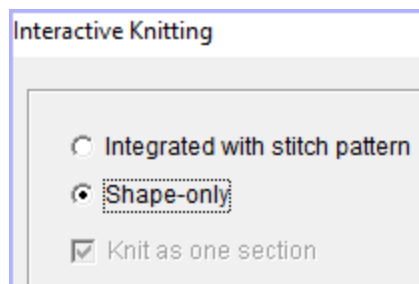


A shape file needs to be opened ([See page 39](#)), after which a garment piece has to be selected from the "Select piece" list that is displayed.

If a piece is opened that is not integrated with a stitch pattern the Shape-only will be displayed immediately, in a light blue color on a gray background.

Accessing *Options / Shape-only* while an integrated garment piece is displayed will present the "Shape-only options" dialog (see below). Options may be changed after which DesignaKnit returns to the main screen with the Shape-only piece.

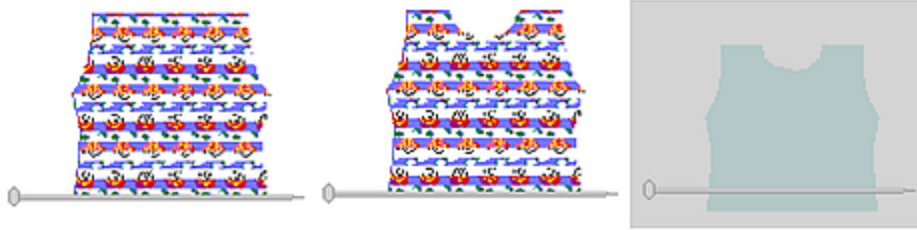
If a different garment piece is needed it can be selected by accessing the *Shape File / Select Piece* menu option, which will reopen the "Select piece" box.



When opening an integrated garment piece, the option to open it with its integrated stitch pattern or as a Shape-only is offered, together with the option to knit it as one section, if this is possible ([See page 102](#)).

Even if "Knit as one section" was ticked previously for an integrated garment piece, if there is more than one section, this will be taken into account in the "Piece Overview" window and knitting instructions when "Shape-only" is chosen.

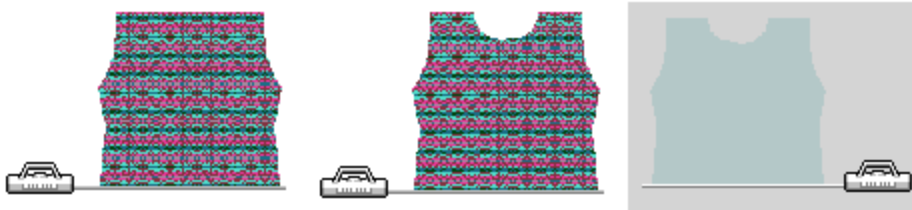
"Knit as one section" and "Shape-only" are mutually exclusive.



The two leftmost images are of a hand knitting garment piece with an integrated stitch pattern, with "Knit as one section" ticked and unticked subsequently.

The rightmost image is the "Shape-only".

The knit direction has stayed the same in this case, because the option to start on the Left or Right side was not changed.

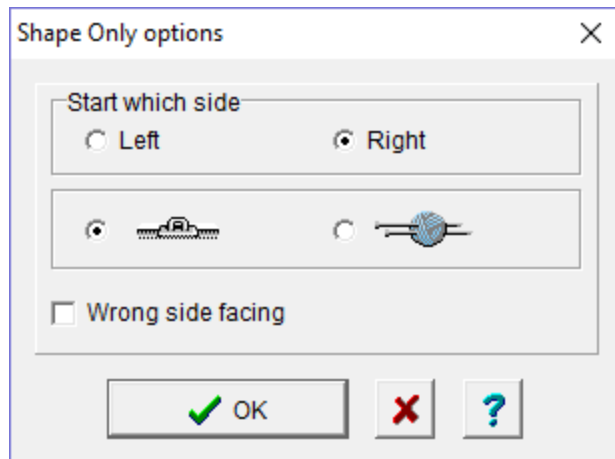


The two leftmost images are of a machine knitting garment piece with an integrated stitch pattern, with "Knit as one section" ticked and unticked subsequently.

The rightmost image is the "Shape-only".

The carriage has moved to the other side due to the "Shape-only" option. If it needs to be on the same side as before, the Left or Right option needs to be ticked in the "Shape Only options" box.

When 'Shape-only' is chosen from the "Interactive Knitting" box or switched to by ticking *Options / Shape-only* for an integrated garment piece the "Shape Only options" window is presented from which different options can be selected as described below.



The starting side can be chosen as Left or Right as well as whether the right or wrong side of the fabric is facing the knitter.

Machine or Hand knitting can be selected and the choice made here is independent of the method of knitting of the stitch pattern itself, so that the original method will be reverted to as soon as the 'Shape-only' option is unticked.

It is not possible to knit a 'Shape-only' from DesignaKnit combined with a stitch pattern from a Mylar sheet or PE1 because the cable link connection to the computer disables all the other function buttons while it is being used.

If machine knitting is chosen and the current knitting machine is a Passap E6000, E8000, or Passap punch card machine, the Passap technique number (or the number of passes per row for the punch card machine) is requested when the Shape-only options dialog is closed.

As the different options are selected, the Progress windows in the background change to reflect the different choices. The "Yarns" window will be closed as there are no color instructions to display. If Hand knitting was chosen instead of Machine knitting, the "Chart" window would be displayed instead of the "Needle Bed" window and vice versa. The Knit direction of the hand knitting needle or the knitting machine carriage in the "Piece Overview" window will change to the other side, depending on whether Left or Right side is chosen.

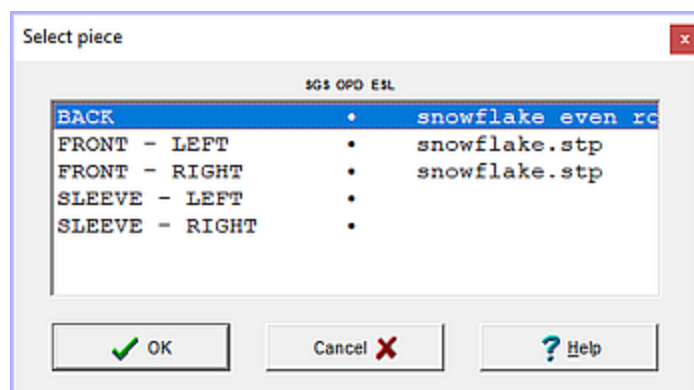
Switching back to the integrated garment piece by unticking *Options / Shape-only* restores all information.

Once the information is entered correctly, the Shape-only piece is placed on the screen and hand knitting ([See page 40](#)), machine knitting ([See page 46](#)) or Preview ([See page 54](#)) can be started.

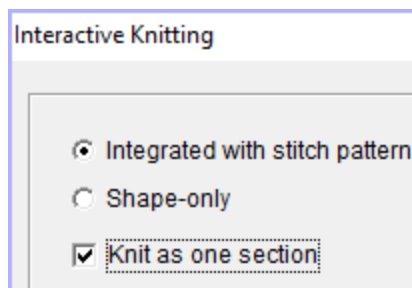
## Integrated Garment Piece

Integration of a stitch pattern with a garment piece has to take place in Original Pattern Drafting or Stitch Designer, prior to Interactive Knitting. In Original Pattern Drafting a different stitch pattern can be selected and applied to each garment piece, positioning it over the piece as required. Saving the file will save the integration information with it. This is a quick way of integrating different stitch patterns within the same garment (shape file). In Stitch Designer a stitch pattern can be designed and shape file pieces can be selected, positioned and integrated with the current stitch pattern. As the stitch pattern is the starting point, changes can be made to it and will be reflected in the garment piece it is associated with immediately. Stitch patterns can be applied to Standard Garment Styling pieces, but only through Stitch Designer. Although Standard Garment Styling does not show the integrated stitch pattern, it will be shown in Interactive Knitting when the "Integrated with stitch pattern" option is selected. The stitch pattern will also be shown when the Standard Garment Styling shape file is opened in Original Pattern Drafting.

Information about integrating can be found in the Stitch Designer and Original Pattern Drafting manual.

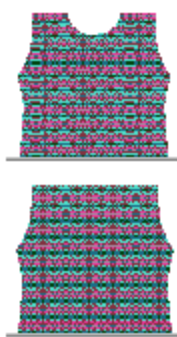


Knitting integrated garment pieces starts by opening a shape file ([See page 39](#)), after which a garment piece has to be chosen from the "Select piece" list that is displayed.



The "Integrated with stitch pattern" option needs to be selected and a decision made whether the piece is to be knitted as one section after which all the appropriate Progress windows will be opened to present all necessary information to start knitting.

If a different garment piece is needed it can be selected by accessing the *Shape File / Select Piece* menu option, which will reopen the "Select piece" box. Each piece in the shape file may have been integrated with a different stitch pattern, which can have a different method. If no stitch pattern is used, the piece is Shape-only and will be displayed as light blue on a gray background.



**One or more sections** - Knitting in more sections occurs where the work has to be divided, such as shaping around the neckline ([See on page 55](#)), where first one and then the other shoulder part is knitted, while the stitches of the part not currently being knitted are held in some way. It may be prudent to pause Interactive Knitting by clicking the 'Stop' button ([See page 53](#)) on the Left Toolbar at the point where the knitting is divided in order to knit a few rows of waste yarn on the stitches that need to be put into holding position.

To demonstrate the effect of ticking or unticking this option, the same garment piece is shown with the "Knit as one section" box unticked in the top and ticked in the bottom image.

If a piece has a Jacquard stitch pattern, or Intarsia when using an AG50 carriage is chosen, it can only be knitted in one section and the "Knit as one section" option is ticked and grayed out to indicate it cannot be changed. Changing a piece from one of these to another method will redisplay the "Interactive Knitting" dialog from which "Knit as one section" may then be unticked. Changing the method will change it for all instances where this stitch pattern occurs ([See page 110](#)).

In the same shape file, different pieces may be integrated with a hand knit stitch pattern that could have a Flat or Circular, stocking, garter or reversed background stitch, or a machine knitting stitch pattern that could be Fair Isle, Jacquard, Intarsia or Right / Wrong side facing texture. The method can be changed between hand and machine knitting, but as this has major implications, it is recommended to do this in Stitch Designer or Original Pattern Drafting if required. The Method of Knitting can also be changed between Flat and Circular etc., or between Fair Isle and Jacquard etc., but these changes all have major implications, best dealt with in Stitch Designer, as Interactive Knitting does not have the relevant checking tools. Where the combination of stitch pattern and method is incompatible DesignaKnit will present warnings.

The currently selected knitting machine applies to all pieces of a shape file as it is applied to the DesignaKnit session, from wherever it is chosen. Changing the knitting machine in Interactive Knitting may have implications, as some combinations of stitch pattern, method and knitting machine are incompatible. If the selected machine is incompatible a warning message will be presented, and the garment piece will be closed, presenting the "Interactive Knitting" screen instead. The "Esc" key can be pressed at that point, leaving a blank screen from which *Options / Knitting Machine* can be accessed and a compatible knitting machine chosen instead. Subsequently clicking anywhere on the blank screen will bring back the "Interactive Knitting" screen from which the shape piece needs to be chosen again.

Once the information is entered correctly, the integrated garment piece is placed on the main screen and hand knitting ([See page 40](#)), machine knitting ([See page 46](#)) or Preview ([See page 54](#)) can be started.

## View Info

<b>Options that affect Hand knitting</b>	<b>103</b>
<b>Options that affect Machine knitting</b>	<b>104</b>
<b>Common informational items</b>	<b>106</b>

The options that affect the piece that is currently displayed can be viewed through the *View / Info* menu option. This will show all options that are relevant to knitting the current swatch, shape-only or integrated garment piece in one place. Displaying the information in this way provides a neat summary without having to consult the different Progress windows or remembering the information.

The settings shown are the result of options set elsewhere in DesignaKnit, such as in the method of knitting and knitting machine, and can only be viewed. A print screen may be taken for future reference by pressing "Alt-PrtSc" to include only the active window.

Examples have been given of several scenarios and their specific options, while the common informational items have been described below the images ([See page 106](#)).

## Options that affect Hand knitting

Options affecting swatch knitting	
Name of setting	Current value of setting
Mode (swatch / shape only / integrated)	Swatch
Stitch pattern name	rosyhand.stp
Stitch pattern size	24x64
Swatch size	24x64
Knitting method	Hand knitting (Flat)
Knitting starts at left edge of row 1 on chart	N
Inversion from left to right	OFF
Total length adjustment	OFF
Tensions	30.00x40.00=10 cm

The images show a Swatch, Shape-only and Integrated garment piece in turn (as can be seen both at the top of each window and by the "Current value of setting" for "Mode"), with their various settings.

For a swatch, both stitch pattern size and current swatch size are shown. Whereas they are identical in this example, they could easily have been set to a different size, so that the stitch pattern would have been repeated as

many or few times as needed to fill the swatch.

"Knitting method" ([See page 112](#)) and "Knitting starts at left edge of row 1 on chart" ([See page 113](#)) are only shown if a stitch pattern is involved.

## Options affecting shape-only knitting

Name of setting	Current value of setting
Mode (swatch / shape only / integrated)	Shape Only
Shape file name	basic shape.shp
Pattern piece name	Back
Knitting starts at left edge of row 1 on chart	N
Inversion from left to right	ON
Total length adjustment	OFF
Double row steps	ON
Tensions	30.00x40.00=10 cm

If a Shape-only is open, the "Mode" value will reflect this, and both the shape file and current pattern piece (garment piece) name are given.

The screen for an Integrated garment piece shown below the Shape-only combines the settings for Swatch and Shape-only, although 'Swatch size' is no longer applicable and therefore absent.

There are no machine knitting related items present in the Info screens if the piece is set to Hand Knit.

## Options affecting integrated knitting

Name of setting	Current value of setting
Mode (swatch / shape only / integrated)	Integrated
Shape file name	basic shape.shp
Pattern piece name	Back
Stitch pattern name	rosyhand.stp
Stitch pattern size	24x64
Total length adjustment	OFF
Double row steps	ON
Knitting method	Hand knitting (Flat)
Knitting starts at left edge of row 1 on chart	N
Inversion from left to right	OFF
Tensions	30.00x40.00=10 cm

## Options that affect Machine knitting

## Options affecting swatch knitting

Name of setting	Current value of setting
Mode (swatch / shape only / integrated)	Swatch
Knitting machine	Brother KH965
Cable link	Magnetic switch link
Preselection	Brother
Serial port	4
Stitch pattern name	bright.stp
Stitch pattern size	23x22
Swatch size	46x66
Use of colour changer	ON
Knitting method	Fair Isle
Carriage starting position	Left
Inversion from left to right	ON
Total length adjustment	OFF
More than 4 tension wires available	ON
End needle selection	OFF
Tensions	30.00x40.00=10 cm

The images show a Swatch, Shape-only and Integrated garment piece in turn, with their various settings.

The currently selected knitting machine, cable link and last known serial port that is used to connect computer and knitting machine are displayed.

It is possible to select a different knitting machine through *Options / Knitting Machine* or *Options / Method of Knitting*, but care needs to be taken that it is compatible with the chosen method of knitting. E.g., selecting a Silver Reed with the AG50 Intarsia carriage if the stitch pattern is not Intarsia will lead to an error.

If preselection is applicable for the selected knitting machine ([See on page 39](#)), its method is indicated here.

Stitch pattern size and swatch size are different in this example because the swatch size has been set to include several repeats of the stitch pattern.

Options affecting shape-only knitting	
Name of setting	Current value of setting
Mode (swatch / shape only / integrated)	Shape Only
Knitting machine	Brother KH965
Cable link	Magnetic switch link
Preselection	Brother
Serial port	4
Shape file name	basic shape.shp
Pattern piece name	basic back
Carriage starting position	Right
Inversion from left to right	ON
Total length adjustment	OFF
Double row steps	ON
Tensions	30.00x40.00=10 cm

A Colour Changer is not used for a Shape-only piece as it does not involve a stitch pattern, therefore its state is only shown for a Swatch or Integrated garment piece. The Colour Changer can be switched on or off easily by clicking the Left Toolbar button ([See on page 38](#)).

The Carriage starting position is shown for swatch, shape-only or integrated garment pieces and may change from right to left, or vice versa, when switching the method from an Integrated garment piece to a Shape-only, as it has in the examples on the left.

"Knitting method" ([See on page 130](#)) is only shown when a stitch pattern is involved.

Although it is possible to select a different method of knitting through *Options / Knitting Machine* or *Options / Method of Knitting*, care needs to be taken if this is done in Interactive Knitting as the change is immediately incorporated in the current stitch pattern. If this was not intended it can only be reversed by setting it to the intended method again in the same way.

Options affecting integrated knitting	
Name of setting	Current value of setting
Mode (swatch / shape only / integrated)	Integrated
Knitting machine	Brother KH965
Cable link	Magnetic switch link
Preselection	Brother
Serial port	4
Shape file name	basic shape.shp
Pattern piece name	basic back
Stitch pattern name	bright.stp
Stitch pattern size	23x22
Use of colour changer	ON
Total length adjustment	OFF
Double row steps	ON
Knitting method	Fair Isle
Carriage starting position	Left
Inversion from left to right	ON
More than 4 tension wires available	OFF
End needle selection	OFF
Tensions	30.00x40.00=10 cm

Knitting method	3-colour Jacquard
Carriage starting position	Right
Inversion from left to right	ON
Jacquard colour separation method	B

The "More than 4 tension wires available" setting originates from the Knitting method and only applies to Fair Isle knitting, as does the "End needle selection".

For a Jacquard stitch pattern, the "Jacquard color separation method" would have been displayed instead of the "4 tension wires" and "End needle" options, and information such as shown in the image on the left would appear.

The screen for an Integrated garment piece combines the settings for Swatch and Shape-only, although 'Swatch size' is no longer applicable and therefore absent.

There are no hand knitting related items present in the Info screens if the piece is set to Machine Knit.

## Common informational items

- **Mode** - displays whether the piece that is currently displayed is a swatch, shape-only or integrated garment piece. Ticking *Options / Shape-only* will alter the mode from Integrated garment piece to Shape-only, thereby removing the stitch pattern instructions. When this option is unticked the Mode will be changed back to integrated if a stitch pattern was previously integrated.
- **Stitch pattern name** - is shown for Swatches and Integrated garment pieces.
- **Pattern piece name** - is the current garment piece name, which is shown for Shape-only and Integrated garment pieces.
- **Inversion** - indicates whether the stitch pattern is inverted from left to right. Although the information applies only to machine knitting, it is present for hand knitting patterns as "OFF". If it shows as "ON" it means that the stitch pattern, as viewed in Stitch Designer and Original Pattern Drafting, is flipped from left to right in the Needle Bed Progress window and when it appears on a knitting machine as fabric. The Inversion state is a result of the method of knitting and type of knitting machine. Inversion is "ON" for all patterns that are knitted on a Japanese machine, except those with a Right side facing texture method. For Passap machines, the setting is opposite.
- **Total length adjustment** - this setting affects Jacquard stitch patterns that are separated by using methods A, B and D and means that a swatch, shape-only or integrated garment piece is automatically adjusted to an even number of rows by adding a single pattern row if necessary. Total length adjustment occurs when an odd number of rows is specified, while the knit method requires an even number. Although the information applies only to machine knitting, it is present for hand knitting patterns as "OFF".
- **Double row steps** - this setting is displayed for a shape file whether it is a Shape-only or an Integrated garment piece. This setting is dictated by the shaping of slopes, such as shoulder parts, in Original Pattern Drafting. More information can be found in the "Shaping" chapter in the Original Pattern Drafting manual.
- **Tensions** - when a swatch is displayed, the Stitch Designer Tension is shown next to "Tensions", while for a shape file, whether Integrated or Shape-only the tension settings are taken from the saved shape file ([See on page 196](#)). Stitch patterns do not have tensions of their own, because they can be used with different shape files (garment pieces) which could have different tension requirements.

# Alerts

Interactive Knitting offers different ways in which attention can be drawn to the screen or to actions that need to be taken. Some of the Alerts come from Interactive Knitting, some are embedded in the Stitch Designer stitch symbols of the swatch, shape-only or integrated garment piece that is being knitted. All Alerts can be switched on and off as needed. Some exclude each other.

Whether sounds can be heard depends on the Windows setup. If, for example, a 'no-sounds' sound scheme has been selected, there will be no sounds, whatever Alert is chosen. The same is true if sounds are disabled or muted in the volume mixer. These settings can be found in Windows Control panel and the sound icon in the Windows task bar (usually on the bottom right hand side of the Windows screen).



**Bell Alerts** - can be switched on by clicking the button on the Left Toolbar or selecting *Options / Bell Alerts*. A sound will be heard whenever a row is reached where a shaping action is required such as increasing or decreasing stitches, when the carriage setting needs to be changed or if a change is needed in the threading of a yarn color. If no specific symbols were included for increasing or decreasing, there will be no specific instructions from DesignaKnit, other than to increase or decrease however many stitches are shown in the Progress windows. Which action is required will be shown in the "Countdown + Shaping Instructions" progress window and if symbols are used, they will be displayed in the "Chart" or "Needle Bed" window. The Alert can be switched off by unticking the menu option or clicking the Left Toolbar button again.

"Bell Alerts" is mutually exclusive with "Verbal Instructions" and with "Audible Warnings".



**Verbal Instructions** - can be switched on by clicking the button on the Left Toolbar or selecting *Options / Verbal Instructions*. A voice will give basic instructions for the same actions as for Bell Alerts, in addition to the Bell Alert sound. Which action is required will be shown in the "Countdown + Shaping Instructions" progress window, and if symbols are used, they will be displayed in the "Chart" or "Needle Bed" window. Verbal Instructions can be switched off by unticking the menu option or clicking the Left Toolbar button again.

"Verbal Instructions" is mutually exclusive with "Bell Alerts" and with "Audible Warnings".



**Stitch Symbol Alerts** - can be switched on by clicking the button on the Left Toolbar, or by clicking *Options / Symbol Alerts*. If the alert of a Memo symbol has been activated in Stitch Designer and carries a sound, this will be sounded once for the row in which that symbol occurs. Its abbreviation will also be shown in the title bar on the "Chart" or "Needle Bed" window.

All Memo symbols have Alerts that can be activated in the Stitch Designer palette by clicking the musical note in its bottom right hand corner. This will change the appearance of the musical note from gray to black. Symbols with an activated alert will be shown with a surrounding box in a contrasting color in the "Chart" or "Needle Bed" window and will sound with the alert that was assigned in Stitch Designer. Alerts cannot be assigned to yarn colors and Smart Symbols. More information about defining and changing alerts for Memo symbols can be found in the Stitch Designer manual in the "Palettes" chapter.

If there are stitch cables in the design, these will sound an alert on every row that they occur, unless the sound of the Alert has been set to 'None' in the Cables Organizer in Stitch Designer. More information on changing these Alert sounds can be found in the Stitch Designer manual in the "Stitch Cables" chapter.

Different Alert sounds can be assigned in the Stitch Symbols Organizer. More information can be found in the Stitch Designer manual in the "Palettes" chapter. Different sounds can be used to differentiate between certain techniques. For example, the symbol to increase by picking up a stitch between two other stitches can be assigned a different sound to the symbol to increase by winding a loop around the needle and knitting this.

If a row contains more than one symbol or stitch cable with an associated sound, only the first one will be sounded, although all symbols with an alert will be highlighted in the "Chart" or "Needle Bed" window. The option can be switched off by clicking the button again or unticking *Options / Symbol Alerts*.

"Stitch Symbol Alerts" can be switched on and off independent from the other Alerts.



 **Audible Warnings** - can be switched on for machine knitting by clicking the button on the Left Toolbar or by selecting *Options / Audible Warnings* to play user defined sounds. This set of warnings is independent and different from "Bell Alert" and "Verbal Instructions" and can be set up in Interactive Knitting to give specifically tailored sounds when certain events occur, such as warnings for starting or stopping a color, when to pick up, cast off or hold stitches, when to set a marker and many more.

When "Audible Warnings" is selected, both "Bell Alerts" and "Verbal Instructions" are disabled.

**Setup for Knitting Instruction Sounds using PC Speaker**

	Pitch	Duration	Tune	Test
Start colour (Fair Isle)	[5]	200	Aa	
Stop colour (Fair Isle)	5	200	aA	
Change colour	5	100	aAaAa	
Select colour	3	1000	a	
Initial casting on	4	1000	C	
Final casting off	4	100	ff c ddddc	
Left increases/castons	3	100	ABCDEFGabcdefg	
Left decreases/castoffs	3	100	gfedcbaGFEDCBA	
Right increases/castons	6	100	ABCDEFGabcdefg	
Right decreases/castoffs	6	100	gfedcbaGFEDCBA	
Put stitches on hold	4	400	GEC	
Pick up held stitches	4	400	CEG	
Centre shaping	4	100	bcbcbcbcbcbcbcbcbc	
Set marker	5	100	ab ab ab ab ab ab ab	
Download next section	4	100	a b c a b c a b c	
Change knitting method	4	100	abcba abcba abcba	
Change carriage	4	100	ef ef ef ef	
Change lace carriage setting	4	100	ab ab ab ab	

Reset OK Cancel Help

The range of events that sounds can be attached to is more extensive than for the other alerts. Sounds for each event can be customized to suit individual requirements by selecting *Options / Audible Warnings Setup*, which will present the dialog shown on the left.

The events for which a tune can be created or changed are listed together with entry boxes in which different values can be typed.

**Pitch** - can range from 1 to 7, where 1 is the lowest and 7 the highest pitch, resulting in lower or higher tunes.

**Duration** - the sound will last as long as the time that is entered in this box and can range from 0

for no sound, to 9999 milliseconds.

**Tune** - any of the letters "A" to "G" or "a" to "g" can be used in different combinations to create a specific tune. The lower case notes are an octave higher than the capital letter notes.

**Test** - this button can be used to hear the tune.

"OK" can be clicked to save the changes, "Cancel" to cancel them. Clicking the "Reset" button restores the DesignaKnit default tunes.



 **Highlights** - can be switched on by clicking the button on the Left Toolbar or by using the *Options / Highlight Alerts* menu option. When the option is activated the "Countdown + Shaping Instructions" Progress window will be highlighted briefly at the first and last row, whenever a row is reached where some shaping action needs to be taken, and whenever the carriage setting needs to be changed.

This Alert option can be used simultaneously with any of the sound Alerts.

# Methods of Knitting

Hand Knit Options .....

Machine Knit Options .....

Stitch Pattern Methods .....

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"Method of Knitting" refers to whether Hand or Machine knitting is used, as well as the way in which stitch patterns and textures such as Fair Isle, Intarsia, Jacquard and Right / Wrong side facing texture methods for machine knitting (See on page 130) or Stocking stitch, Reverse stocking, Garter(K), Garter(P) etc. for hand knitting are worked into the design (See on page 112). The method that is chosen in *Options / Method of Knitting* is displayed as an abbreviation (See page 206) in the Stitch Designer and Interactive Knitting title bars and where applicable, [ Hand Knitting ] or the name of the currently selected knitting machine is displayed in the Original Pattern Drafting title bar.

Different options will be presented depending on the product level purchased. In the 'Complete' product level the method of knitting can be hand or machine knitting, while knitting machines are absent in the 'HandKnit' product level and 'Machine Standard' and 'Machine Pro' do not include hand knitting methods. These differences have been taken account of in the manual as much as possible although some 'inapplicable' information cannot be avoided.

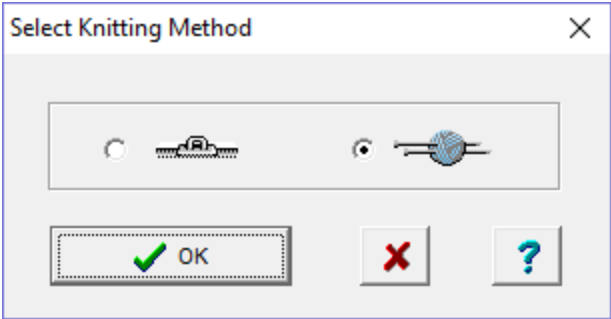
The method of knitting affects the printing of knitting instructions (including printing of Punch cards and Mylar sheets), downloading to a knitting machine, and Interactive Knitting. A background stitch is chosen for hand knitting to determine the expected and unexpected stitches. A specific knitting machine is selected for machine knitting as well as which method is used to knit the garment piece or stitch pattern. It is a good idea to decide on the intended method early on as changing it later will affect the work. It is also good practice to check stitch patterns for errors in Stitch Designer before saving and using them in garment pieces, to avoid possible compatibility issues.

The method of knitting, including whether a Colour Changer is in use, is a property of the stitch pattern. Changing the method of knitting of a stitch pattern changes it for all the garment pieces in which it is used! The choice of knitting machine and its settings are global settings that will be applied until explicitly changed.

The method of knitting can be changed in different sections of DesignaKnit:

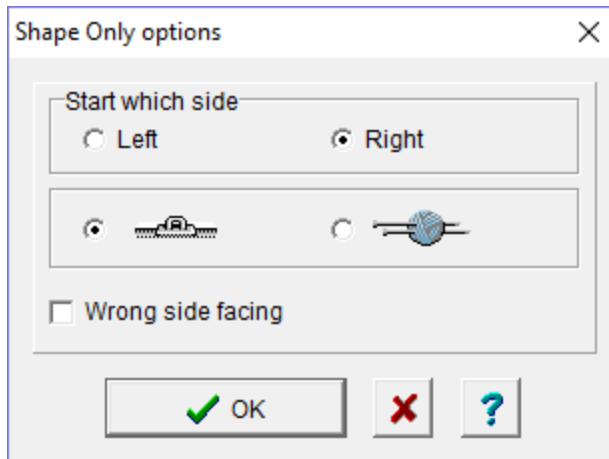
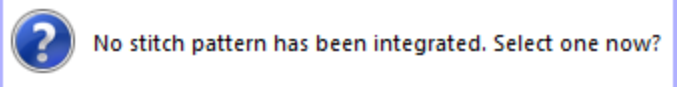
- **Standard Garment Styling** - changing the method is limited to choosing between hand and machine knitting and selecting a different knitting machine. If stitch patterns have been integrated with any of the garment pieces their settings will be applied when the instructions are printed, or at the Interactive Knitting stage.

The dialog shown on the right is presented after accessing *Options / Method of Knitting*. If "Hand knitting" is selected (as in this image) all Shape-only garment pieces will be set for hand knitting. If "Machine knitting" is selected, all Shape-only pieces will be set for machine knitting. The knitting machine that is chosen from the list that appears next (See page 118)



will be applied to all pieces with a machine knitting method. After selecting hand or machine knitting, the workspace is returned to.

- **Original Pattern Drafting** - on selecting *Options / Method of Knitting*, a check is performed to see whether a stitch pattern has been integrated with the active piece. If it has not, the message shown on the right will appear and one can be chosen from the Thumbnails view ([See page 209](#)) after clicking "Yes". Hand knit ([See page 112](#)) or Machine knit ([See page 119](#)) options will then be presented as applicable, depending on the method of the selected stitch pattern.



If the piece is to be knitted in one color without a stitch pattern "No" needs to be clicked after which the "Shape Only options" dialog is presented. A shape file can contain pieces with and without integrated stitch patterns.

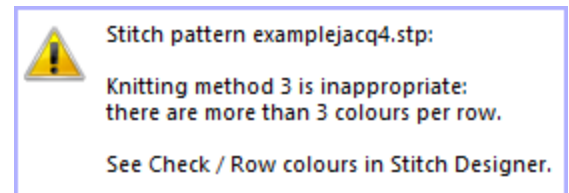
Either Machine or Hand knitting can be selected by clicking on the appropriate button (machine knitting in this example), as well as the starting side and whether the knitting is "Wrong side facing". If the method is hand knitting, "Row 1 is wrong side" will appear instead of "Wrong side facing".

Clicking "OK" presents a list of knitting machines if appropriate ([See page 118](#)) or returns to the main

workspace. The options chosen will be remembered.

Shape-only settings are remembered for all Shape-only pieces in DesignaKnit, so if they are changed, they will stay this way until they are changed again.

Although each (garment) piece in a shape file can have a different method of knitting, any changes that are made to the method of an active piece with an integrated stitch pattern will be applied to all instances of that stitch pattern, in whichever shape files it may appear, throughout DesignaKnit. If the method is incompatible with the pattern content or not the best option, an error message such as shown here will appear. The previous method will be retained unless the pattern would fit even with the less than optimum choice, in which case the new method will be selected ([See also Jacquard on page 133](#)). The "See Check / Row colors in Stitch Designer" line will only appear if there are more colors in the pattern than allowed for in the selected method.

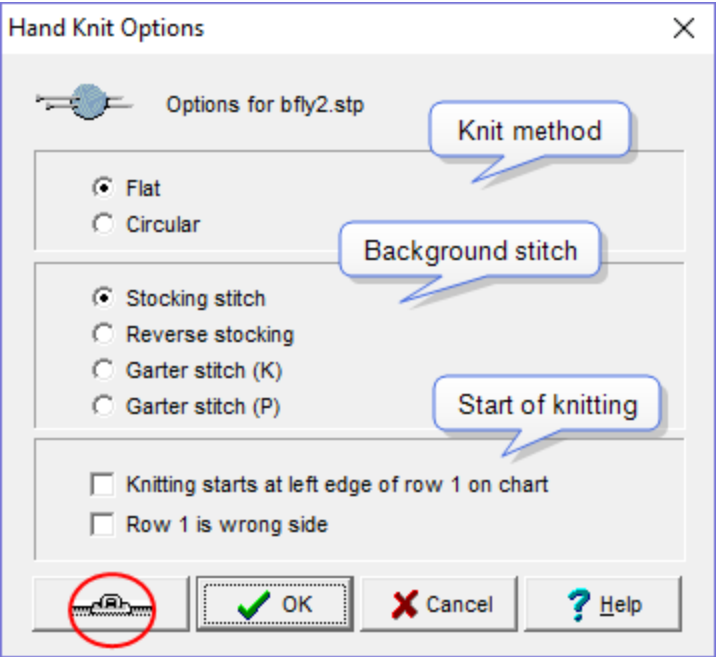


- **Stitch Designer** - changes are made to the current stitch pattern on saving. All instances of that stitch pattern in all shape files where it occurs will be affected. If the same stitch pattern is to be used with different methods for different shape files or garment pieces, it is best to save each one separately and reflect the intended method in the file name so it can easily be identified and applied correctly. If a method is incompatible with the number of yarns in the pattern, a warning will be given but the stitch pattern can be saved anyway as Stitch Designer allows a great degree of flexibility. If this change is not intended, the

- Undo button on the Left Toolbar, "Ctrl-Z" or *Edit / Undo* can be used to undo it. It is always a good idea to use the *Check* menu option or click the Check button at the right hand side on the Top Toolbar in Stitch Designer to find out whether there are errors in the pattern.
- **Interactive Knitting** - changes to the method of knitting will be applied immediately and saved to the current stitch pattern without further prompting. If the knit method is changed when knitting a swatch or an integrated piece to one that does not match the number of colors per row or the total number of colors in the pattern, a message is given and the previous knit method is retained.

## Hand Knit Options

<b>Knit Method</b> .....	<b>112</b>
<b>Start of knitting</b> .....	<b>113</b>
<b>Background stitch types</b> .....	<b>114</b>



There are several options that can be set for hand knitting. If the product level is Complete, the Machine knitting button is present (see red circle) and Machine knitting can be switched to instead of HandKnit, by clicking the symbol.

The "Hand Knit Options" dialog can be accessed through *Options / Method of Knitting* in Original Pattern Drafting, Stitch Designer and Interactive Knitting.

### Knit Method

**Flat** - indicates knitting on two needles.

**Circular** - means that the knitting is all around and seamless. This can be achieved by knitting with a circular needle or by using three or more needles that are double pointed to continuously knit in one direction. Although these choices do not affect the design process or a chart, they affect printed text instructions as DesignaKnit will instruct to read rows in alternate directions for flat knitting, or always in the same direction, for circular knitting.

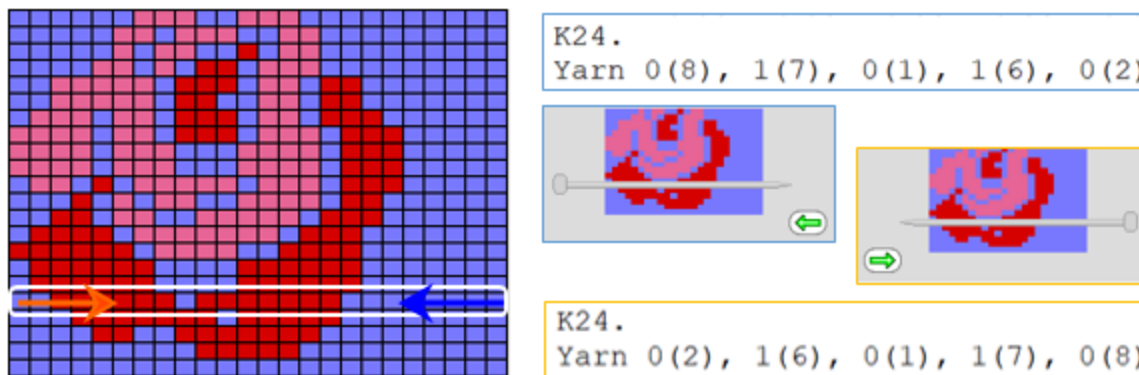
Which hand knit method is used in the current design can be seen in the DesignaKnit title bar by the letters which follow the file name. E.g., "Hk" (Hand knitting stocking stitch), "Hk O", (Hand knitting stocking stitch, Circular), "Hp" (Reverse stocking stitch), "Hgp" (Garter stitch, K), "Hgp" (Garter stitch, P). "O" is added if Circular knitting has been selected.

## Start of knitting

The settings in this section determine the knit direction and whether the knitting starts on the right or wrong (reverse) side of the work and affect printed and Interactive Knitting instructions. Which options are to be ticked depends on whether the stitch pattern is to be worked on the right or reverse side of the fabric and whether the chart (in Interactive Knitting) is to be read from left to right or vice versa

Elements in a stitch pattern may need to be repositioned due to a change in these two options, such as where stitch cables are used. More information about this can be found in the Stitch Designer "Stitch Cables" chapter. Stitch Designer shuffles the stitch pattern itself, while Original Pattern Drafting and the *Shapes / Integrate* option in Stitch Designer will adjust its vertical integration with a garment piece, as the former deals with (unintegrated) stitch patterns and the latter with shapes to which stitch patterns have been integrated.

**Knitting starts at left edge of row 1 on chart** - affects the stitch outline of garment pieces because it controls the starting side and thereby the knit direction at each row. Changing this setting affects the placement of double row steps, which changes the stitch outline for gentle slopes such as shoulders. It may also affect the vertical integration of stitch cable patterns, which has been explained in the Stitch Designer manual in the Stitch Cables chapter. How the garment piece is affected can be seen by accessing the Shaping as X's, Garment Picture, Garment Symbols, Garment Text and Garment Notation previews in the *Print* menu and in the Piece Overview progress window in Interactive Knitting, as well as by viewing the piece outline in Original Pattern Drafting and Stitch Designer.



"Knitting starts at left edge of row 1 on chart" means that the chart is read from the right (unticked) or the left (ticked), as can be seen in the images above where row 5 of a stitch pattern is highlighted. The colors of the each arrow in the stitch pattern image correspond with the outline colors of Pattern text instructions and Interactive Knitting Piece Overview that are shown to its right.

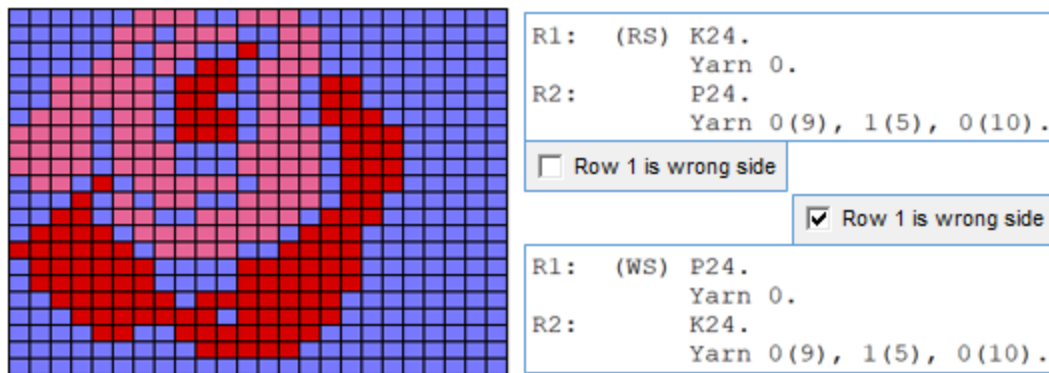
In general, this option should be ticked if the knit method is Flat, row 1 is a wrong side (reverse) row and knitting is from the left needle to the right as in conventional knitting. "Row 1 is wrong side" should then also be ticked to confirm that this is a wrong side row. With both these options ticked, all right side rows are read from right to left as they are viewed on the chart and wrong side rows from left to right.

The significance of starting at one side or the other is that it controls the fine detail of the edge shaping (or stitch layout) throughout the piece wherever there are gentle slopes (more horizontal than vertical) such as for shoulders. More detailed information can be found in the 'Shaping' section of the Original Pattern Drafting manual. Gentle slopes create **double row** steps because of the rules about only doing shaping on a certain side of the piece. This applies to hand knitting as well as machine knitting.

A left or right side start can be assigned in *Options / Method of Knitting* in Original Pattern Drafting, Stitch Designer and Interactive Knitting. The changes that are made apply to row 1 of the unintegrated stitch pattern, which may be different to row 1 of a garment piece with which the stitch pattern is integrated. Changes that are made in Interactive Knitting are immediate and will be saved with the stitch pattern without prompting.

If the knit direction is changed by changing the Knit Direction Indicator (information about this can be found in the Original Pattern Drafting manual), or the "R" and "L" buttons in the integrate dialog in Original Pattern Drafting or Stitch Designer ([See on page 217](#)), the changes will apply to the current DesignaKnit session and the stitch pattern itself is not affected.

**Row 1 is wrong side** - is only available to be ticked when the method is Flat as there is no distinction between odd and even rows in Circular knitting.



Changing "Row 1 is wrong side" does not affect the finished knitted result or the knit direction. However, starting on the right or wrong (reverse) side of knitting has an effect on the knitting instructions. Where there are Knit stitches on row one if the right side is viewed and

knitted, these have to be Purl when the knitting is turned over to be viewed and knitted from the wrong (reverse) side. This is shown in the images on the left. The stitch pattern itself does not change, but the "Pattern text" instructions for printout in Stitch Designer (shown here) and Interactive Knitting instructions do.



Decreasing at the start of rows is easier when using Knit stitches rather than Purl. When following a printed chart it is important to know at which end the first row is started. Starting at the other end will change all the shaping instructions for any gentle slopes.

## Background stitch types

The background stitch type provides a knitting background with **expected** and **unexpected** stitches. According to the selected background stitch type, DesignaKnit presents a starting background in the correct stitch in Fabric view. In Grid view, the background will be blank, whichever method is chosen as the blank cells represent the 'expected' stitch. As the background stitch type determines the expected and unexpected stitches, it will affect the knitting instructions and abbreviations.

On the finished side of the fabric, a stocking stitch garment piece will show only Knit stitches, while the physical knitting is done by knitting one row, purling the next. The expected stitch (which appears on the physical finished side and in Grid view) is Knit.

A garment piece that is produced by using the garter stitch will show all blank rows in Grid view, alternate Knit and Purl stitch rows in fabric view, while the physical knitting is done by knitting (or purling) all rows. The expected stitches are alternating Knit and Purl rows, which will show as blank Grid cells. In the case of Garter (K) the first row will be Knit and in the case of Garter (P) the first row will be Purl.



The image above depicts the basic background stitch where no unexpected stitches are used. For all four methods, Grid view shows only blank grid cells. The result in Fabric view is different for each method.

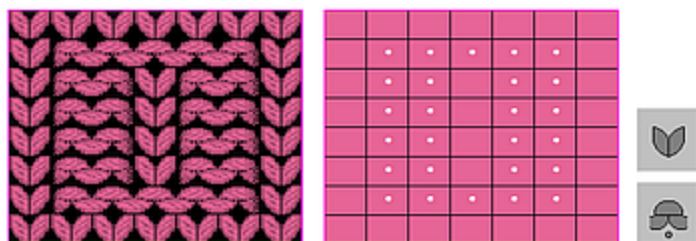


As soon as even one unexpected stitch is placed, changing the method of knitting will change the Grid view to reflect the swapped over expected and unexpected stitches, while the Fabric view will stay unaltered.

Expected   and unexpected   stitches influence errors that may be shown in Knit direction. They also present a different 'Grid' view and affect the knitting instructions and abbreviations. All four background stitch types have been described below with images. To achieve the same finished fabric result, the expected (blank) and unexpected (dotted) stitches in the Grid were changed, depending on each method.

Placing an unexpected stitch on a Stocking stitch background means a Knit stitch is changed to Purl. Placing an unexpected stitch on a Reverse stocking background changes a Purl stitch to Knit. On a Garter stitch method, a Knit stitch on a Knit row will change to a Purl stitch, while a Purl stitch on a Purl row will change to Knit.

## Stocking stitch background



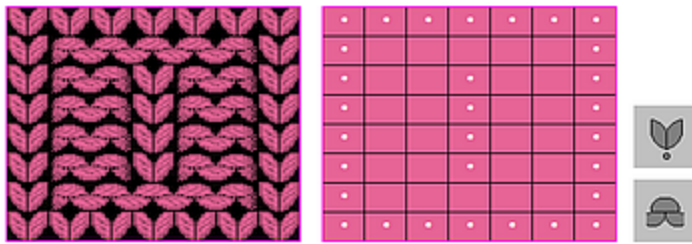
Flat Stocking stitch is produced by knitting one row, purling the next. Circular Stocking stitch is produced by knitting in the round, using only Knit stitches. The smooth or Knit side of the fabric is on the finished side of the fabric. The stocking stitch method uses the Knit stitch as the expected stitch, which carries no symbol in Grid view. If there were no textured patterning, there would be no unexpected stitches

and the grid would be blank (see image above).

In the Grid image shown here the unexpected Purl stitches form the texture pattern that is shown in fabric view. The unexpectedness is shown in the Purl icon as there is a little circle underneath it.

With Circular knitting, the Grid view will be the same, as every expected stitch would be Knit. The knitting instructions in printouts and Interactive Knitting would mention only Knit rows, whereas for Flat knitting, Knit and Purl rows would alternate to result in the Knit stitch on one side of the fabric.

## Reverse stocking background



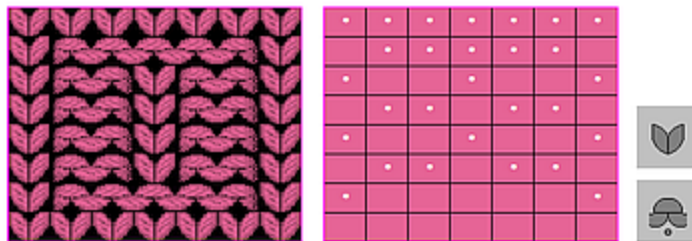
Reverse stocking (Flat and Circular) is essentially the same as stocking stitch, except that the Purl side is on the finished side. Flat Reverse stocking is produced by purling one row, knitting the next. If the box for "Row 1 is wrong side" is ticked, the first row would be Knit instead of Purl. Circular Reverse stocking is produced by knitting in the round, using only Purl stitches.

Purl is the expected stitch (blank grid cells) on the finished side of the fabric and Knit is the unexpected stitch represented by dotted cells, as can be seen in the Grid image and the Knit icon shown here. The image is the reverse of the Grid image of the Stocking stitch method.

For most patterns which are based on a Purl background, the stocking stitch method works well, but where the Purl stitches significantly outnumber the Knit stitches, the Reverse stocking background may be considered to result in a Grid view that is more easily read.

With Circular knitting, the Grid view will be the same as every expected stitch would be Purl. The knitting instructions in printout and Interactive Knitting would mention only Purl rows, whereas for Flat knitting, Purl and Knit rows would alternate to result in the Purl stitch on one side of the fabric.

### Garter stitch (K) background



Flat Garter stitch (K) is produced by knitting every row, resulting in a ribbed effect of the finished fabric. Circular Garter stitch is produced by knitting one 'row' and purling the next to achieve the ribbed effect. The beginning of a row would need to be marked to know when to switch from Knit to Purl.

Although Knit and Purl rows are used alternately and equally, as the first row of finished fabric is Knit

in Garter stitch (K), as can be seen in the image above ([See page 115](#)), the Knit icon has no marking and Purl has the unexpected symbol. However, when drawing in the pattern, using the stitch symbol that carries the "." results in a Knit stitch being changed into Purl and vice versa. This can be seen in the image where the first row consists of expected Knit stitches. The expected stitches on the second row are Purl. The Knit stitches at either side are achieved by using the Pencil tool and selecting the unexpected stitch symbol. Although, looking at the icon, this would seem to be Purl, a Knit stitch is achieved. On the third row, where the background stitch is Knit, selecting the unexpected Purl symbol results in actual Purl stitches.

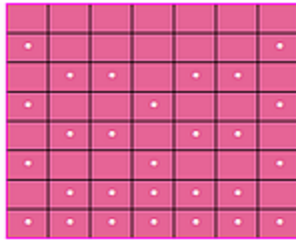
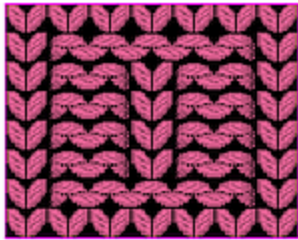


It is important to realise that the unexpected stitch is drawn when choosing the stitch symbol that has the dot below it, regardless of whether it is Knit or Purl.

Although the Stocking stitch method could be used with every second row drawn in the unexpected stitch, the pattern could become very 'busy' with symbols. Using the Garter stitch background, Grid and Chart cells are blank for Knit stitches on a Knit row and Purl stitches on a Purl row. They are dotted for Knit stitches on a Purl row and Purl stitches on a Knit row.

The Garter stitch method is most useful for Flat knitted lace. In order not to overcomplicate or obscure the lace pattern by having a line of dots on every other row, the Garter stitch method can be used which then presents a clean background onto which the lace stitches can be placed.

## Garter stitch (P) background



Garter stitch (P) is essentially the same as Garter stitch (K), but is provided for knitters who prefer using the Purl stitch. Flat Garter stitch (P) is produced by using only Purl stitches on every row, resulting in a ribbed effect of the finished fabric. Circular Garter stitch is produced by purling one row and knitting the next. The beginning of a 'row' would need to be marked in order to know when to switch

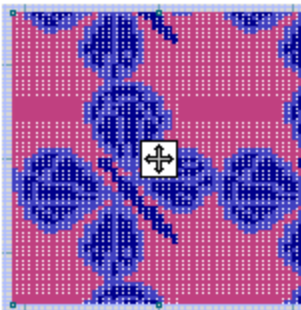
between Purl and Knit.

The Purl icon has no marking as it is the expected stitch, while the Knit icon carries the unexpected symbol.

The Garter stitch (P) stitch pattern shown here is the same as for Garter stitch (K) in fabric view, although the Grid view is the reverse because the expected and unexpected stitches are opposite in each method. Garter stitch (K) can be looked at for more in depth explanation.



Unless there is a specific reason not to choose it, selecting the Stocking Stitch (Flat or Circular) is recommended as it is the most basic method and conforms to most published charts and patterns.



When a pattern chart is printed ([See on page 164](#)) the expected type of stitches is printed as blank cells and the unexpected type as dots. When Stocking Stitch is chosen as the background stitch this means that knit stitches on a knit row will be represented by blank cells, while purl stitches on a knit row will be represented by dots.

In these two images the effect can be seen clearly. The stitch pattern was designed with purl stitches in knit rows and for purposes of demonstrating a small piece was created with this stitch pattern. The first image shows the

effect of selecting the Stocking stitch background and the second the Reverse Stocking stitch. These settings may need to be played with to arrive at the desired effect where the main body of stitches is represented by blanks and the other type by dots.

The setting that was chosen as a Hand Knit method can still affect the looks of the symbols printout when Machine Knit has subsequently been selected.

Once the options have been configured and "OK" is clicked, the program returns to the main workspace.

Machine Knit Options

Knitting machine setup .....121

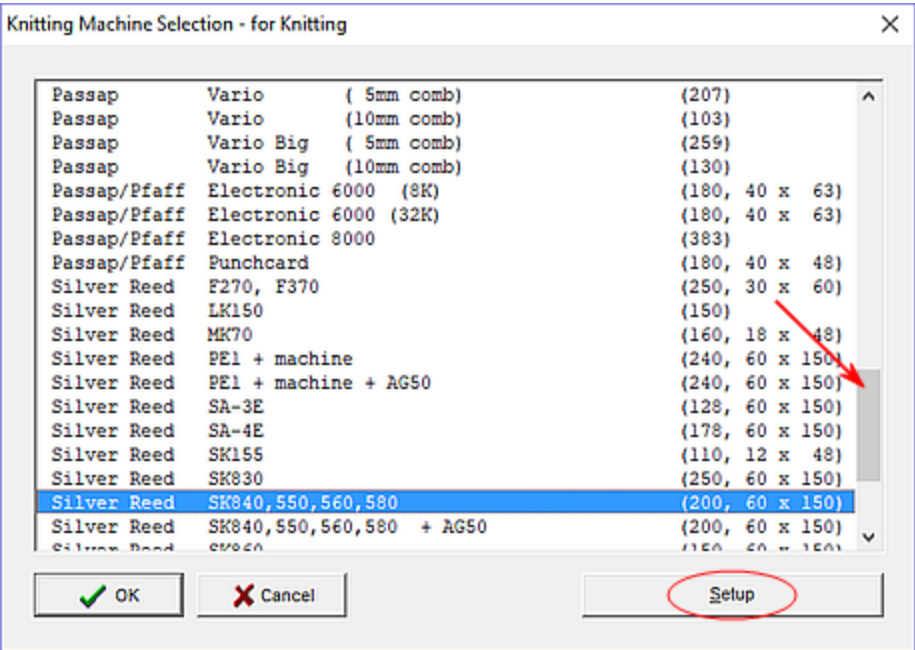
Advanced .....122

Copy, Delete machine .....123

Jacquard .....124

Templates .....129

Default technique .....129



If *Options / Method of Knitting* or *Options / Knitting Machine* is accessed from Standard Garment Styling, for a Shape-only piece in Original Pattern Drafting or from the Yarn Numbers & Feeders dialog in Stitch Designer, the "Knitting Machine Selection" dialog as shown on the left is presented, otherwise the "Machine Knit Options" dialog will be displayed (See page 119). The required knitting machine can be selected and setup with the correct cable link if one is used (See page 121), in order to communicate with it at the Interactive Knitting stage.

number of needles it contains and, if punch cards, Mylar or other reader sheets can be used with it, their sizes (See page 119).

The ruler bar to the right of the list (see red arrow) can be moved by clicking, holding and dragging the mouse to display and select different machines. Alternatively the first letter of the machine can be typed to jump to the desired make, after which the cursor can be moved up and down to select the correct model. When "OK" is clicked the program returns to the workspace and the selected machine will be saved and used in DesignaKnit until it is changed.

If necessary, the knitting machine setup button (see red oval above) can be clicked to access options such as setting up the cable link, specifying the starting direction, the number of tension wires (See page 121).

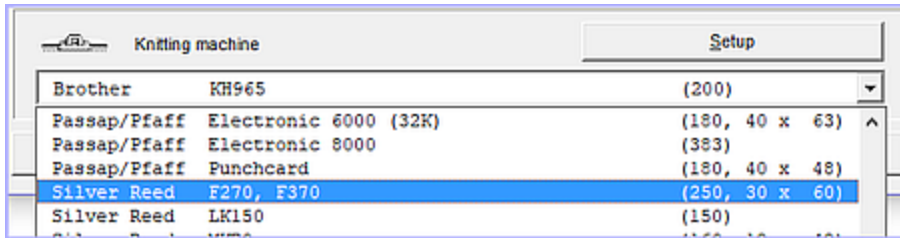
All Makes	Manual patterning / Plain knitter	( 90)
All Makes	Manual patterning / Plain knitter	( 98)
All Makes	Manual patterning / Plain knitter	(100)
All Makes	Manual patterning / Plain knitter	(110)
All Makes	Manual patterning / Plain knitter	(115)
All Makes	Manual patterning / Plain knitter	(120)

Editable "All Makes" machines are provided which are identical to each other except for the number of needles. They can be used as simple alternatives or when a

certain knitting machine cannot be found in the list.

These machines can be used as they are or their name and number of needles can be edited in the Advanced (See page 122) section of the setup after which they are saved. On downloading a program update an edited machine is recognized by DesignaKnit and will not be overwritten. If "All Makes" machines are deleted, they will be reinstated on the next program update.

The number of needles of an "All Makes" knitting machine is incorporated in its abbreviated name in the title bar of DesignaKnit, e.g., [ Plain Knitter 100 ], in Stitch Designer, Interactive Knitting and Original Pattern Drafting whenever this is relevant.



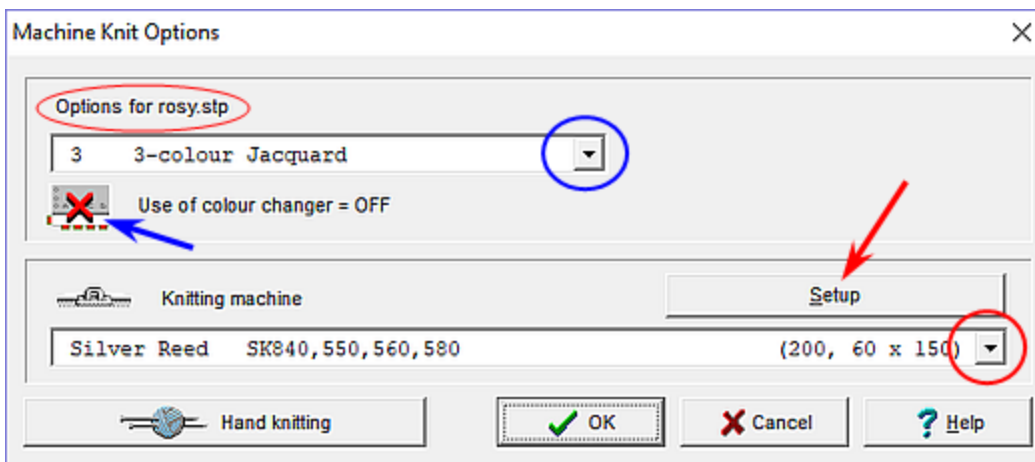
**Punch card** - The information to the right of each machine shows the total number of needles as well as the size of a punch card or Mylar sheet that is suitable for that machine.

If there are no "n x n" values after the number of needles, the knitting

machine is not suitable for punch cards and the (Stitch pat and Integrated) template options of Stitch Designer are not available.

The image above shows part of the "Machine Knit Options" dialog. In this example, the Silver Reed F270 and F370 have 250 needles and the stitch pattern size that can be used with an Integrated template (See page 166) has to be 30 stitches wide, or a multiple thereof (See also Rules for stitch pattern templates on page 167).

If a different size of punch card is needed, the number of stitches and rows for a template can be altered for one of the "All Makes" machines (See on page 129), or an existing knitting machine may be copied (See on page 123) after which the number of stitches and rows for a template can be changed.

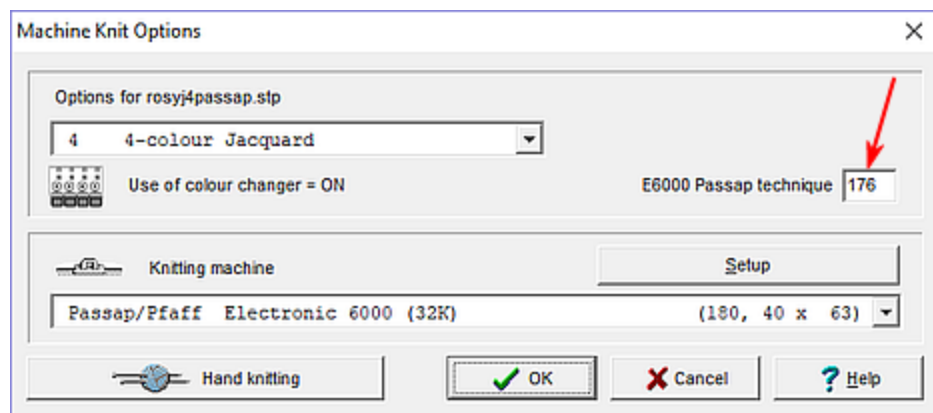


When viewing this manual on the computer, the cursor may be hovered over the image. Where the cursor changes to a hand it can be clicked on as a quick way of getting to the relevant section.

Knitting is accessed, the "Machine Knit Options" dialog as shown here is presented to allow selection of the stitch pattern knitting method and the knitting machine. Changing the stitch pattern method and whether a Colour Changer is used will change it for all instances of that stitch pattern, while changing the knitting machine and its setup will change it for the DesignaKnit session, independent of the stitch pattern. The dialog presents the options that are chosen for the current stitch pattern (see red oval). If the stitch pattern is located in a folder that is different from the default location, its path will also be shown.

If an integrated stitch pattern is involved and Options / Method of

The method of knitting ([See page 130](#)) can be selected from the first drop down menu (see blue circle). The Colour Changer state ([See page 268](#)) can be changed by clicking its button (see blue arrow). The appropriate knitting machine can be chosen from the second drop down menu (see red circle) and the knitting machine Setup ([See page 121](#)) can be accessed if necessary (see red arrow). The Hand Knitting button (see light blue circle) can be clicked to switch to hand knitting.



**Passap** - the "Machine Knit Options" screen is slightly different for the Passap E6000 and E8000 knitting machines, as a Passap technique number field is added to the dialog (see red arrow). A different technique can be stipulated for each stitch pattern, if required, by entering a different number in the box.

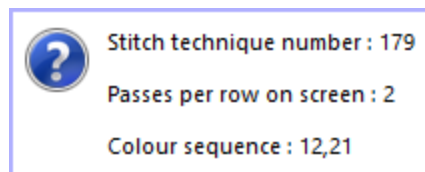
This field will contain the default technique number for the currently

chosen knitting machine ([See page 129](#)) unless the pattern has been saved with a valid number previously. In this example, the Passap E6000 (32K) has been selected. Once the options in this dialog have been accepted by clicking "OK", the title bar of the DesignaKnit screen will reflect this by adding it to the knitting machine information in the following format: [ Passap/Pfaff Electronic 6000 (32K) #176 ]



The technique can be changed by clicking in the field, which will open a dialog in which the number can be changed by entering directly or using the up and down little triangles.

If the entry is not valid, an error message will appear ([See page 129](#)), otherwise a box will appear with details of the chosen method (as shown on the right) and clicking "OK" will apply the technique for the current pattern. When the pattern is saved, the Passap technique number is saved with it in the same way that Jacquard or Right / Wrong side facing texture methods are saved with it.



DesignaKnit caters for a variety of knitting machines that can be physically linked to the computer by a cable. The cable link enables Interactive Knitting as well as downloading and uploading stitch patterns from the Stitch Designer part of the program to certain knitting machines ([See on page 250](#)). This ensures that patterns are applied to the finished garment exactly as they were designed. More information about cable links can be found on the [Soft Byte Ltd](https://www.softbyte.co.uk/cablelinks.htm) website (<https://www.softbyte.co.uk/cablelinks.htm>) from where they can also be ordered.

DesignaKnit provides knitting instructions for all domestic knitting machines available in the United Kingdom at the time of writing. For older models one of the existing options can generally be chosen and configured to suit.

## Knitting machine setup

The selected knitting machine needs to be set up when it is used for the first time. It needs to be connected and switched on with the cable link in place. Clicking the Setup button (see red arrow in the image above) will present the following dialog from which a variety of options can be specified.

When viewing this manual on the computer, the cursor may be hovered over the image. Where the cursor changes to a hand it can be clicked on as a quick way of getting to the relevant section.

**Cable link** - the correct cable link needs to be chosen, after which the USB or serial port number can be changed if necessary. Alternatively, clicking on "Find Link" ([See page 277](#)) will find the correct port that the knitting machine is attached to, provided it is attached and switched on. "Refresh Firmware" can be clicked on to ensure the link is up to date.

Soft Byte Ltd (<https://www.soft-byte.co.uk/usingfindlink.htm>) can be visited if there is a problem with

finding or configuring the correct link. More information can be found in Cable Links Information ([See page 275](#)).

Some of the options on this screen (see red rectangle) are either not available or not applicable to Standard Garment Styling. However, if a knitting machine is selected in Standard Garment Styling, it is useful to make the correct selections to prepare for converting to Original Pattern Drafting and / or Interactive Knitting.

**New stitch patterns use Colour Changer** - if this box is ticked, the Colour Changer will be in use for stitch patterns that are newly created with this particular knitting machine. Different knitting machines can have this option set differently. This does not affect the currently open stitch pattern, for which the Colour Changer state can be changed in the "Machine Knit Options" dialog ([See page 119](#)).

**Start swatch with CAL (if changer not used)** - is only relevant for knitting swatches and ticking this option will force knitting to start from the left side of the needle bed. If left unticked the starting position will be determined by the default settings of the selected knitting machine. Garment pieces have their own CAL/CAR setting which can be altered in *File / Integrate* or by using the Knit Direction Indicator (See Original Pattern Drafting manual).

The significance of starting at one side or the other is that it controls the fine detail of the edge shaping (stitch layout) throughout the piece wherever there are gentle (more horizontal than vertical) slopes such as for shoulders. This applies to hand knitting as well as machine knitting.

For knitting machines that preselect the needles this option refers to the first knitted row and not the first preselected row. A comment to this effect is displayed when this applies.



There is a convention that the Silver Reed carriage starts at the right hand side. With Brother it is not so easy because of the preselection. Each movement of the carriage brings out a (possibly different) selection of needles to create the pattern for the following row.

**More than 4 tension wires available for Fair Isle** - applies to Japanese machines only (Silver Reed, Brother and Toyota) and affects the number of columns used in the Stitch Designer Yarn Numbers & Feeders display as well as the number of yarns displayed in the "Yarns" progress window in Interactive Knitting for Fair Isle patterns that contain more than 4 colors in total. If there are 4 tension wires available, one of these is used for the main yarn which is fed through the front feeder B or 2, leaving the other three to be threaded through a Colour Changer to be fed to the rear feeder A or 1 ([See page 271](#)). "More than 4 tension wires" can be ticked for Fair Isle knitting if the Colour Changer is switched ON and there is an extra tension mast attached to the machine. The extra tension mast allows the main yarn to be threaded separately via the front feeder, freeing all four Colour Changer holders for the contrast yarns.

**End needle selection used for Fair Isle** - if the selected knitting machine automatically selects end needles to upper working position, ticking this box informs the program not to remove contrast yarns when plain rows are knitted between two patterned sections. However, if yarn is not removed it will create a float across the entire width of the pattern.

**Use Automatic Motor control** - is available only where an automatic motor link is used.

## Advanced

Advanced Setup for Silver Reed SK840,550,560,580

Manufacturer / Model: Silver Reed SK840,550,560,580

☒ Electronic  
☐ Centres patterns to the left

☒ Use slow downloads

Maximum stitches: 200  
Maximum colours per row for Jacquard: 6  
Device memory (Kbytes): 0  
Interface method: 6  
Preselect type: 0  
Carriage passes calculation method: 1  
Colour changer type: 2

OK Cancel Help

**Advanced** The information in this section includes technical details about the knitting machine's memory, the program's interface method, number of needles, maximum number of colors in a row for Jacquard knitting, pre-selection type, carriage passes calculation method and Colour Changer type. For machines on the default list, this information is for reference only and is grayed out so it cannot be changed.

For "All Makes" machines ([See page 118](#)) and those that have been copied in order to customize, the name of the machine, maximum number of stitches (needles on the machine bed) and maximum number of colors per row for Jacquard can be adjusted ([See page 123](#)).

**"Use slow downloads"** - is an option that is only used by the programmer in certain circumstances where a cable link is not working properly and should be ignored.

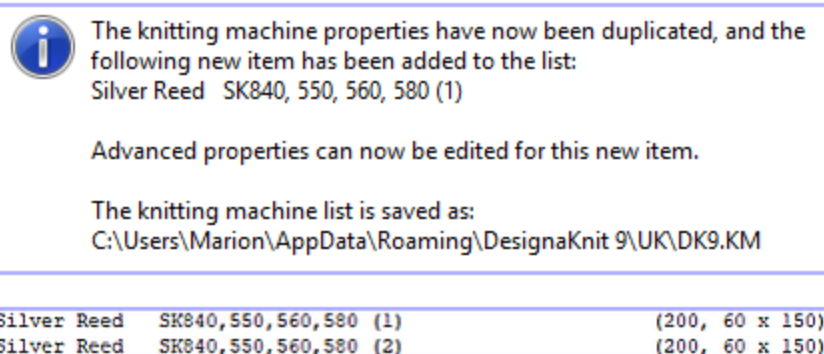
## Copy, Delete machine

If identical knitting machines are used in different projects that are to be worked simultaneously, different names need to be used. For example, if two garment pieces are to be worked on in parallel on two identical Brother KH965 knitting machines, these machines need to have different names for DesignaKnit to be able to distinguish between the projects and so retain the correct information with regards to the progress of knitting. If two different machines are used (even if these are a KH965 and KH965i) this is not necessary. This scenario could be dealt with by using the "Copy Machine" option that is described below, or by amending one of the "All Makes" knitting machines (See page 118).

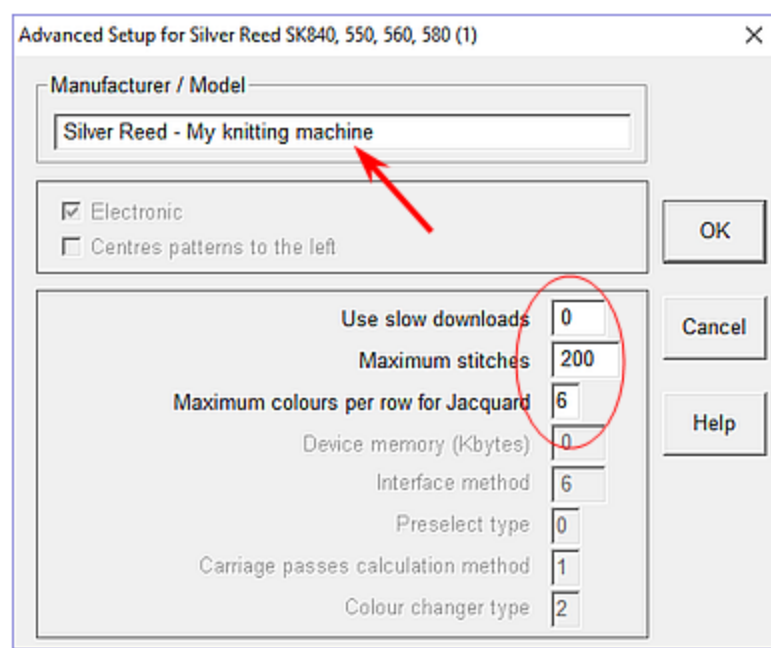
### Copy machine

creates a copy of a selected machines so that custom settings can be applied. For example if a specific machine is not listed or if a different way of separating Jacquard patterns is needed for an otherwise identical knitting machine, the machine that most resembles the required one can be selected and copied.

Copying and amending a knitting machine avoids error messages which DesignaKnit might otherwise display, such as if the number of needles for a specific machine is exceeded. Clicking the "Copy Machine" button presents the information window shown on the right and after "OK" has been clicked, the new machine is added to the list with a (1) added after its name.



Every time "Copy machine" is clicked, a new copy of the selected machine will be added to the list and its number will be incremented, as can be seen in the example where the same Silver Reed machine was copied twice; (1) and (2) were added.



Details such as the name can be changed by clicking "Setup" in the "Machine Knit Options" dialog, then "Advanced", which displays the dialog on the left in which name of the machine, maximum stitches (needles of the needle bed) and colors per row for Jacquard can be specified. Once "OK" is clicked, the resulting 'new' machine will be displayed in the list.

"Copy Machine" is available in the Machine Pro and Complete product levels of DesignaKnit.

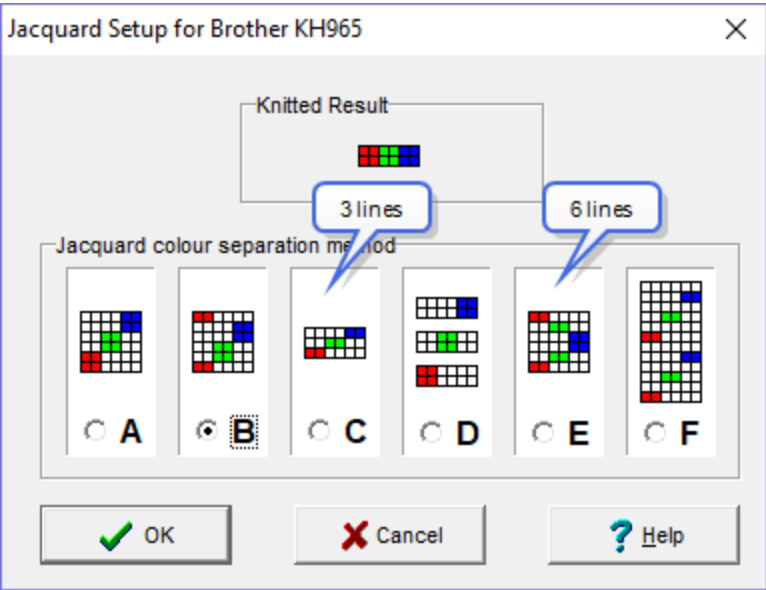
"All Makes" knitting machines have been supplied with different numbers of needles to make it easier to find a machine that fits requirements without copying. They can be used as they are or customized by clicking "Setup",

"Advanced" and "Templates" to change the name, number of needles and size of a Mylar or reader sheet as required.

**Delete machine** is grayed out unless a machine has been copied previously. Only machines that were previously copied, or any of the "All makes" knitting machines can be removed in this way. To safeguard against accidental deletion, knitting machines in the list that has been supplied with the program are read only.

Jacquard

<b>Method A</b>	126
<b>Method B</b>	126
<b>Method C</b>	127
<b>Method D</b>	128
<b>Method E</b>	128
<b>Method F</b>	128



**Jacquard** Jacquard refers to patterns in which some or all rows have two or more colors and each color is worked separately. DesignaKnit will select only the needles to be knitted in any given color, and the carriage (or lock, in case of Passap machines) will be set to slip past the unselected needles. This can result in fabric that can be used on both sides as the yarn is 'woven in' rather than looped around the back and floated, as is the case with Fair Isle knitting.

Jacquard setup can be accessed through *Options / Method of Knitting* or *Options / Knitting Machine* (depending on the product level), clicking "Setup" in the "Machine Knit Options" dialog, followed by clicking on "Jacquard". The current settings, including the current knitting machine will be displayed.

All patterns with more than two colors in a row (except for Intarsia and hand knitted patterns), whether they will be separated by DesignaKnit or by the knitting machine, must have a Jacquard method allocated.

All Jacquard methods (See page 126) require the colors to be knitted one at a time, so that, depending on the number of colors in a row, several passes of the carriage are required to complete one actual row of finished fabric. To facilitate color changing, most Jacquard patterns are constructed in pairs of instructions to create each row of knitting with multiple passes of the carriage, unlike Fair Isle which uses two colors per row that are worked simultaneously in a single pass of the carriage.

In Stitch Designer and Interactive Knitting a knitted row is represented by grid rows. Depending on the color separation method it may take several passes of the carriage to knit one row of finished fabric. A row is measured on the front (outer surface) of the fabric as something that is one stitch high. Jacquard methods of knitting involve

more passes of the carriage to knit one row. For example, a 3 color Jacquard stitch pattern needs 6 passes of the carriage to produce one row of the pattern, because the carriage needs to have two passes per color and each color is knitted separately. Each new yarn is selected from the Colour Changer and is knitted for two passes of the carriage, which are also two consecutive row numbers. The more colors are involved, the thicker the fabric will be.

The 'lines' in the image above match lines on a punch card or template reader and refer to an area of memory when the pattern is downloaded. The different methods refer to the way punch cards or reader templates are 'read' by the knitting machine and translated into actions.

The "Knitted Result" at the top of the screen shows what is to be achieved, while the options A to F denote the different ways in which color changing is handled. The method is shown for three colors and each method shows the number of carriage passes and sequence of the yarns. The same principles apply for any number of colors up to a maximum of six.

Jacquard patterns are knitted in pairs of rows, where row means row of finished fabric. The first row of each pair is always an odd row number in the piece and the second is even numbered. The colors are selected one by one from the Colour Changer, and each yarn color is worked for 2 passes of the carriage. Jacquard stitch patterns must have an even number of rows to separate colors correctly.

For Japanese machines, the color sequence is very important and needs to be correctly chosen for the patterns involved. For example, stitches of the last yarn in the sequence must not lie vertically below any stitches of the first yarn as it would be impossible to knit correctly, resulting in distorted stitches at the edges of each group of stitches of each color.

For Passap machines, which knit a complete pair of fabric rows for each row on the DesignaKnit screen, the issue of Jacquard errors does not apply. These machines have the advantage that Jacquard errors are not possible, although there is loss of vertical resolution so that patterns cannot be as finely detailed as on a Japanese machine.

Jacquard errors can be detected by using the Jacquard option in the Stitch Designer *Check* dialog. If they are found, and changing the sequence of yarns is able to reduce the errors, the option will be given to do this automatically. However, it may not be possible to remove all the errors in this way, in which case an option will appear to alter the pattern automatically to remove the remaining errors. In certain cases it may be preferable to decline that option, in which case DesignaKnit will mark the errors in the pattern with short vertical lines in a contrasting color. Any necessary adjustments can then be made by using the Stitch Designer Pencil tool, which deletes the vertical error markings as they are corrected.

The "Machine Knit Options" dialog offers the Jacquard option to select the way in which yarn numbers are used. Method B is the default method and the sequence of how yarns are knitted can be seen in the 'Method B' section below it. This method results in the fewest number of Jacquard errors. The actual yarn sequence for the pattern can be seen and changed by turning on the *View / Yarn Numbers & Feeders* menu option in Stitch Designer, which has been described in the Stitch Designer manual.

Some of the yarn separation methods are more suitable than others for particular knitting machines. General considerations are listed here:

- Methods A and B are both used on Japanese machines where each yarn color is worked in turn for two passes of the carriage.
- Method A is intended for single bed Jacquard where each pair of rows is identical. Single bed Jacquard requires any yarns that are not used in a row to be suppressed and the carriage set to Slip.

- Method B is intended for double bed Jacquard. Depending on the pattern, suppression is usually unsuitable for double bed Jacquard because the tension and fabric are uneven and there are vertical floats at the edges of the work where the suppressed yarn is carried up to the next row where it is used.
- Method B is also used to convert Fair Isle patterns to Jacquard using the switch on the knitting machine console. If DesignaKnit downloaded a Fair Isle stitch pattern, the 'Jacquard' switch on the knitting machine may be used to convert it to a 2 color Jacquard pattern. If the DesignaKnit pattern is already Jacquard, the separation of rows is taken care of before downloading the pattern to the knitting machine and the 'Jacquard' switch should not be used.
- Method C is used with Japanese knitting machines and requires use of the double height button to double the downloaded pattern rows.
- Methods D, E and F are specialist separation methods and are used only in specific circumstances.
- Passap - Choosing a separation method has no effect on the downloaded pattern for the Passap E6000 and E8000 machines because the Jacquard color separation is handled by the technique numbers of the machine instead ([See on page 260](#)). Technique numbers can be entered in DesignaKnit to identify and apply color separation in accordance with the technique used on the knitting machine.
- Passap - Jacquard color separation is only applicable when printing reader templates for the Passap E6000 and Duomatic machines that can then be used to create punch cards. Method C is used by Passap Duomatic (punch card) machines with the Deco set to 2 and Method D is used for Passap E6000 machines where the pattern is over 40 stitches wide.
- Silver Reed - The PE1 can accept Jacquard color patterns with a maximum of 5 colors per row. Method D separates each color onto a separate reader card and is used to download patterns to the PE1 Design Controller unit. The PE1 can then use that pattern with any of the Silver Reed electronic machines.
- If the knitting machine preselects the needles, the preselect row or rows must first be worked and the carriage placed in position ready to knit the first pass of the pattern. The preselect process will select needles on the main bed. The first pass of each yarn knits the selected needles on the main bed and all working needles on the Ribber. Preselect machines do not select needles on the main bed for the next pass. The second (return) pass will knit all working needles on the Ribber but will not knit at all on the main bed. Preselect machines will select the needles for the first pass of the next color.

What happens on each pass of the carriage in each method is described below.

## Method A

works in pairs of rows, so that there are two passes for each color. If the pattern does not consist of identical pairs of rows, there are likely to be Jacquard yarn sequence errors. Method A is generally used for Brother, Silver Reed and Toyota (Japanese machines).

- Pass 1 = color 1, Row 1
- Pass 2 = color 1, Row 2
- Pass 3 = color 2, Row 1
- Pass 4 = color 2, Row 2
- Pass 5 = color 3, Row 1
- Pass 6 = color 3, Row 2

## Method B

works by separating the rows in pairs. The main color is the first and last in the sequence, with other colors knitted in pairs of passes sandwiched between them. Where a pattern does not consist of identical row pairs, this method generally produces fewer separation errors than method A. This works for Brother, Silver Reed and Toyota (Japanese machines).

This method creates no errors for 2-color Jacquard and is the same method that is used by some Japanese machines to convert Fair Isle patterns to Jacquard by using the switch on the console. This switch should only be used if a DesignaKnit pattern is downloaded as Fair Isle but needs to be knitted as Jacquard. DesignaKnit Jacquard patterns perform the separation on downloading, so the switch should not be used.

If additional colors are used they will follow in paired sequence between the single passes of the first color. When three or more colors are used errors can occur. The *Check* menu option in Stitch Designer can be used to identify and correct them.

- Pass 1 = color 1, Row 1
- Pass 2 = color 2, Row 1
- Pass 3 = color 2, Row 2
- Pass 4 = color 3, Row 1
- Pass 5 = color 3, Row 2
- Pass 6 = color 1, Row 2

## Method C

separates each color from a single row shown in the DesignaKnit pattern into separate rows of knitting. Unlike method A, this means that the pairs of pattern rows do not have to be identical. Among others, this method is used by Passap Duomatic (punch card) machines with the Deco set to 2 (so that the rows are doubled) and Passap E6000 machines where the pattern is over 40 stitches wide ([See on page 259](#)).

If a Japanese machine is used, the Double Row (elongate) switch must be used to double the downloaded pattern rows.

- Pass 1 = color 1, Row 1
- Pass 2 = color 1, Row 1
- Pass 3 = color 2, Row 1
- Pass 4 = color 2, Row 1
- Pass 5 = color 3, Row 1
- Pass 6 = color 3, Row 1
- Pass 7 = color 1, Row 2
- Pass 8 = color 1, Row 2
- Pass 9 = color 2, Row 2
- Pass 10 = color 2, Row 2
- Pass 11 = color 3, Row 2
- Pass 12 = color 3, Row 2

## Method D

Method D separates each color onto a separate reader card and is used to download patterns to the Silver Reed PE1 Design Controller unit. The PE1 can then use that pattern with any of the Silver Reed electronic machines. It is also used for the Passap E6000 knitting machine.

## Method E

works on pairs of rows and separates each row into one pass for each color, but with the colors for the second row in reverse order. Method E is suitable for the Brother CK35 which has a Colour Changer at both ends of the needle bed ([See on page 253](#)). For example, in a 3-color Jacquard design there are six passes, with the colors of rows 1 and 2 separated as follows:

- Pass 1 = color 1, Row 1
- Pass 2 = color 2, Row 1
- Pass 3 = color 3, Row 1
- Pass 4 = color 3, Row 2
- Pass 5 = color 2, Row 2
- Pass 6 = color 1, Row 2

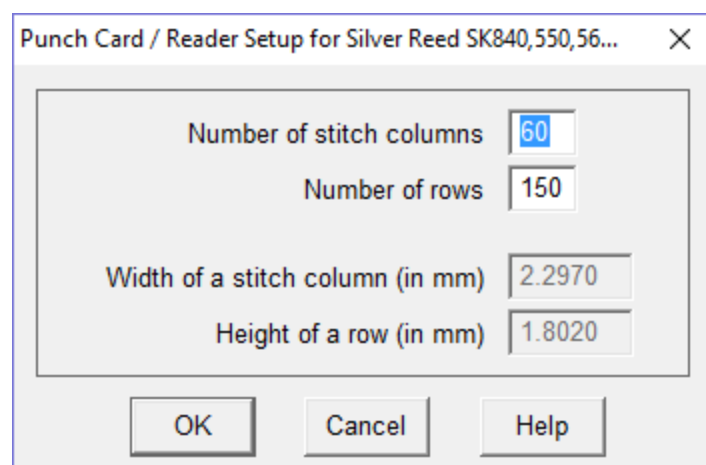
If there are four colors per row, the fourth color would become the central pair of passes, sandwiched between the two passes of color three.

## Method F

is used when a Ribber or second bed are used. It is a Half Milano separation method, in which each pattern row is separated into a pair of passes for each color: the first pass knits the appropriate needles on the main bed and working needles on the Ribber, but the return pass will only knit working needles on the Ribber.

- Pass 1 = color 1, Row 1, Main Bed + Ribber
- Pass 2 = color 1, return, Ribber only
- Pass 3 = color 2, Row 1, Main Bed + Ribber
- Pass 4 = color 2, return, Ribber only
- Pass 5 = color 3, Row 1, Main Bed + Ribber
- Pass 6 = color 3, return, Ribber only
- Pass 7 = color 1, Row 2, Main Bed + Ribber
- Pass 8 = color 1, return, Ribber only
- Pass 9 = color 2, Main Bed + Ribber
- Pass 10 = color 2, return, Ribber only
- Pass 11 = color 3, Main Bed + Ribber
- Pass 12 = color 3, return, Ribber only

## Templates



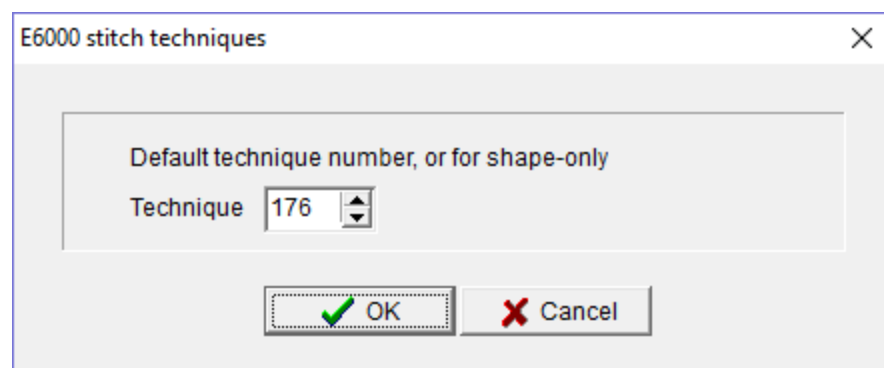
### Templates

DesignaKnit can produce scaled template printouts for punch cards, Mylar sheets and reader cards. Rows and stitch columns can be defined to suit the exact stitch pattern used. The number of rows can be entered in order to prevent the printing of several vertical repeats on punch card templates. The number of stitch columns can be entered in case the full width of a (Mylar) sheet is not used, or only a single repeat is needed. Changing the number of stitch columns for punch cards is inadvisable because a punch card needs the pattern to be repeated across the full width of the card.

The number of stitch columns and rows can be edited for all knitting machines, whether they are the DesignaKnit original machines, amendable "All Makes" or copied knitting machines.

The width of stitch columns and height of rows (in mm) are displayed for information only and are precisely configured per machine to be an exact fit for using to trace over onto a Mylar sheet or punch through to make a punch card.

## Default technique



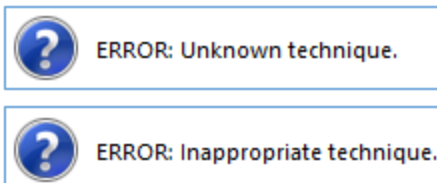
### Default technique

Stitch technique numbers are specific to Passap E6000 and E8000 machines to assign the color separation method that is used in Interactive Knitting.

A default technique number can be specified for each Passap knitting machine in the Setup by clicking the "Default technique" button. This default number will be used when knitting

Shape-only pieces, for new stitch patterns and for stitch patterns that are open on the workspace and have not yet been assigned a technique number. Stitch patterns that already have a technique applied are not affected by changing the default technique.

The number can be changed by using the up and down triangles to its right or by typing a different number directly into the field. If the number is not compatible with the selected knitting machine or method of the stitch pattern, one of the error messages shown on the right will be displayed on clicking "OK" and it will not be accepted. Clicking "Cancel" will lose the information and will default to the previous compatible number.



Sometimes, a specific message such as the one shown on the right will be given to suggest a different method of knitting to match the selected technique number.



For this technique, the stitch pattern's knitting method must be Right facing or Wrong facing.



Stitch technique number : 179  
Passes per row on screen : 2  
Colour sequence : 12,21

If a compatible number is entered, the stitch techniques box will be shown with details of the method that will be used, an example of which is shown on the left. Clicking "OK" accepts this number as the default technique for this knitting machine from then on (See also [Technique numbers on page 260](#)).

The relevant technique number is shown next to the knitting machine name in the title bar of the main Original Pattern Drafting, Stitch Designer and Interactive Knitting screens. E.g., [ Passap/Pfaff Electronic 6000 (8K) #196 ].

As the stitch technique is a property of the stitch pattern, it can be changed for each stitch pattern in the separate stitch pattern field box that appears for Passap machines in the "Machine Knit Options" dialog (See [page 120](#)).

## Stitch Pattern Methods

Fair Isle .....	131
Intarsia .....	132
Jacquard .....	133
Right & Wrong side facing texture .....	134
Summary .....	135

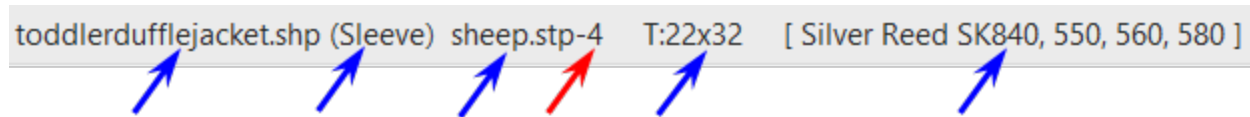
The possibilities of the stitch pattern designs depend on a combination of knitting machine options and the method that is used to knit. For example, a Fair Isle pattern allows only two colors per row, whereas 4-color Jacquard works with four colors in each row. Intarsia is used to knit larger areas in one color and is generally applied to hand knitting, although a Silver Reed knitting machine used with the AG50 Intarsia carriage will automate the process. Right / Wrong side facing texture methods are used for textured knitting.

**Stitch patterns** can be designed and applied to garment pieces. A stitch pattern can comprise colors, textures or both. Stitch pattern (.stp) files can be found, created and amended in the Stitch Designer part of DesignaKnit and applied to individual pieces in shape files. Stitch patterns can also be created in DesignaKnit Graphics Studio in which graphic files are converted into stitch pattern files. Each stitch pattern file has a method incorporated in its design. More detailed information on stitch pattern files and how they are used can be found in [Stitch Pattern Files](#) (See [page 208](#)).

**Stitch textures** are the way in which DesignaKnit works yarns on the needle bed, independent of colors used. Stitch textures can be slip, tuck, garter stitch, cable, lace or weave. They can be applied to stitch pattern files in the Stitch Designer part of the program.

**Methods** are Fair Isle, Jacquard, Intarsia and Right / Wrong side facing texture with which the stitch patterns are designed. The method is a property of the stitch pattern and can be changed in *Options / Method of Knitting* during design or afterwards. The method chosen controls how the needles on the knitting machine carriage are worked.

The top of the DesignaKnit screen (as shown below) displays information about the shape file that is currently loaded. The red arrow refers to the 4 color Jacquard knitting method of the integrated stitch pattern.

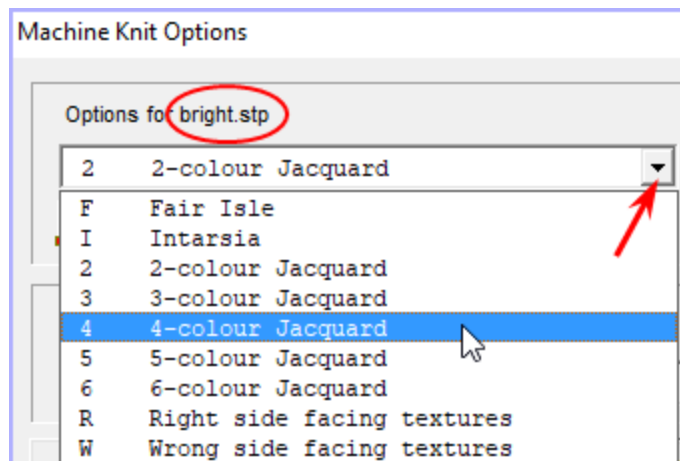


Reading from left to right the arrows point to the name of the shape file, the currently active piece (Sleeve), the stitch pattern that is used (Sheep.stp), the abbreviation of the method (4), the tension and the knitting machine if one is selected.

Different knitting methods can be used, depending on how many yarns are used, the complexity and repetitions of the pattern and the selected knitting machine. All possibilities are briefly described below.



When a knitting method is changed it cannot be undone by using keyboard or button action. It has to be changed back in the same way, through *Options / Method of Knitting*.



Although the actual knitting method is controlled by the settings of the controls on the carriage, DesignaKnit needs to know how to knit the pattern. Selecting the knitting method determines how the program downloads to the knitting machine and enables display of any errors for that particular method.

The method is a property of the stitch pattern, which is illustrated on the left where a different method can be selected for "bright.stp" (see red oval) by clicking the drop down triangle (see red arrow) in the "Machine Knit Options" dialog, bearing in mind that this will change the method for all instances of that stitch pattern.

If the stitch pattern is integrated with a garment piece, the integrated position is contained within the shape file for each piece and can be seen on the workspace in Original Pattern Drafting, Stitch Designer (when the shape file pieces are displayed over the stitch pattern) and in the Interactive Knitting Progress Windows.

Applying a different method changes the way in which stitch pattern or garment piece are worked, and also has a bearing on printing the Integrated template ([See page 166](#)) if a punch card or Mylar sheet is used.

The different methods and when they are most appropriate have been described below.

## Fair Isle

The Fair Isle method knits a maximum of two colors in a single pass of the carriage. This method can deal with sections of true Fair Isle (with a maximum of two colors per row) as well as sections of texture, as indicated by the presence of Smart Symbols.

Rows that contain a Smart symbol in addition to the main Knit or Purl have a needle selection that is defined only by the smart symbol. Any color pattern that is also present in the same row has no effect on needle selection, but can be added for memo purposes, or for visualizing the pattern more easily. For example, where Thread lace is used, a color might illustrate the thread lace effect more easily visible than just a symbol.

Generally Fair Isle consists of a small repeating pattern where the colors are close together. The yarn is carried across the back of the work, picked up when needed and so creating 'floats' of yarn on the reverse side. This information is used in Integrated templates ([See on page 169](#)).

If more than one Smart symbol is used in one row, an error message such as the one shown here is displayed when saving, using the Stitch Designer Check procedure, printing, downloading or at the Interactive Knitting stage.



Error in pattern .

There is more than one type of smart symbol at row 8.

The advantage of Fair Isle over Jacquard is that the knitting is quicker because one pass of the carriage knits two colors. Colour and texture (such as slip, tuck, cable, weave etc.) may be used in the same row, as long as there are no more than two colors and one Smart symbol. Other stitch symbols can be placed in the same row and if Stitch cables are added, they are subject to their own rules. When experimenting with adding different symbols and textures the Stitch Designer *Check* option can be used to keep checking whether a stitch pattern is still without errors.

Fair Isle should be chosen for:

- Fair Isle knitted on a Brother, Silver Reed or Toyota machine.
- Any pattern that uses mixed techniques, but that includes a band or bands of Fair Isle.
- Thread Lace patterns, where the knitting machine has a Thread Lace setting.
- Lace knitting and (for Brother and Silver Reed machines ) lace which is combined with Fair Isle and textured knitting.
- Garter stitch patterns knitted with the Brother Garter Carriage.
- Reverse Fair Isle patterns, where the floats form the outer pattern to create pull-up or faux weave effects. If the pattern is not entirely symmetrical, the *Modify / Flip / Flip Horizontally* menu option needs to be used before saving, integrating and downloading to ensure that the pattern is the correct way.
- Hand knitting patterns which follow the same rules as those for machine Fair Isle.

Fair Isle should NOT be chosen for:

- Patterns where the colors are knitted separated rather than in one row. In that case two color Jacquard should be chosen instead.
- Passap knitting machines cannot knit two colors simultaneously, so the Fair Isle option is not available and two color Jacquard should be chosen instead.

## Intarsia

The Intarsia method allows knitting of separate areas of color without floats, resulting in, for example, a sheep in a meadow picture. At the edges of each different color the yarns are crossed so that the areas are connected without holes or gaps. With the exception of the Silver Reed AG50 Intarsia carriage which is specially designed for Intarsia knitting, Intarsia patterns cannot be downloaded to a knitting machine. Intarsia is a manual technique whereby all the needles in use must be brought forward manually and the yarns laid across the needle bed according to the pattern. It is most suitable for hand knitting.

Intarsia is primarily a method of producing multi colored work but stitch textures (including stitch cables) can also be used, any such technique usually having to be performed manually. There are no limitations of the number of

colors or stitch types that can be shown in any row, allowing complete freedom of mixing color and texture. There are, however, some things to be taken into account:

- For the Silver Reed AG50 carriage, the needle selection is controlled only by the yarn colors and not by stitch symbols.
- At the Interactive Knitting stage, only the instructions for color changing will be given. This information is used by Integrated templates ([See on page 171](#)).

## Jacquard

Using two, three, four, five, or six-color Jacquard results in a fabric that may be reversible because the back of the work does not have the floats that are produced in for example Fair Isle knitting. Instead it produces a dotted effect. Jacquard patterns are achieved by knitting each color separately onto selecting needles, with the main carriage set to 'Slip'. Double-bed Jacquard can be knitted, with the understanding that DesignaKnit can only program the main needle bed, not the Ribber or secondary needle bed.

2 color Jacquard knits 2 colors in a row although there may be more colors in the pattern in total. If a stitch pattern has 3 colors per row but, for example, 5 colors in total, the method must be at least 3 but could also be 4 or 5 color Jacquard, depending on how many yarns are required to be knitted in each row of finished fabric. The more yarns in a row of finished fabric, the thicker the fabric. DesignaKnit will allocate the different yarns to Colour Changer positions ([See on page 268](#)). Yarn allocation is described in detail in "Yarn Numbers & Feeders" in the Stitch Designer manual.

In Stitch Designer, if the Jacquard method is changed to one with a higher number than there are yarns in the pattern in total, it will generate an error message, but will still save the pattern with that method. However, Yarn Numbers & Feeders will not display and the pattern will not open in Interactive Knitting. Stitch Designer will always accept the method, even though an error message is generated in order to provide greater flexibility to the user.

Changing a 4 colors per row pattern to 3 color Jacquard in Original Pattern Drafting or Interactive Knitting will generate an error message and the method will revert to its original state, while changing 4 color Jacquard to 5 color will apply the 5 color Jacquard as long as there are at least 5 colors in total in the pattern. This is because, although each row may only contain 4 colors, there may be a requirement to knit 5 yarns for each row of finished fabric in order to avoid changing yarns, at a cost of resulting in a thicker fabric.

Texture cannot be used in a Jacquard pattern, but up to six colors can be specified in any one row, depending on the knitting machine. As needle selection is controlled only by the yarn

colors and not by stitch symbols, an error message such as the one shown here will appear if Smart Symbols are used in a Jacquard stitch pattern. Smart Symbols are ignored in printouts and cannot be downloaded to the knitting machine. A method consistent with the maximum number of colors in a row should be chosen, according to which DesignaKnit will separate the colors and display the sequence in which to knit.



There is a smart symbol at row 21. Symbols that control needle selection cannot be used with Jacquard patterns.

The Jacquard separation method can be selected by clicking on the Jacquard button in knitting machine setup ([See page 124](#)) and is also used in Integrated templates ([See on page 172](#)).

The advantage of double bed two color Jacquard over Fair Isle is that there are no floats. As the contrast yarn is fully knitted in at the back of the fabric it barely shows on the front. Another advantage is that the tensions are constant throughout the knitted piece, whereas with Fair Isle the tensions can vary depending on the lengths of the floats in each part of the piece.

## Right & Wrong side facing texture

Right / Wrong side facing texture methods are used for textured knitting, using Slip, Tuck, Garter, Weave, Lace or Cable techniques in patterns that do not contain Fair Isle bands with two colors in one row. There is only one selecting and one deselecting stitch type in each row. These methods can also be used for all over Lace patterns (for Brother electronic and Silver Reed machines), Lace combined with stitch texture and for stitch patterns that are created using the Brother Garter Carriage.

If more than one Smart symbol is used in one row, an error message such as the one on the right is displayed when saving, using the Stitch Designer Check procedure, printing, downloading or at the Interactive Knitting stage.

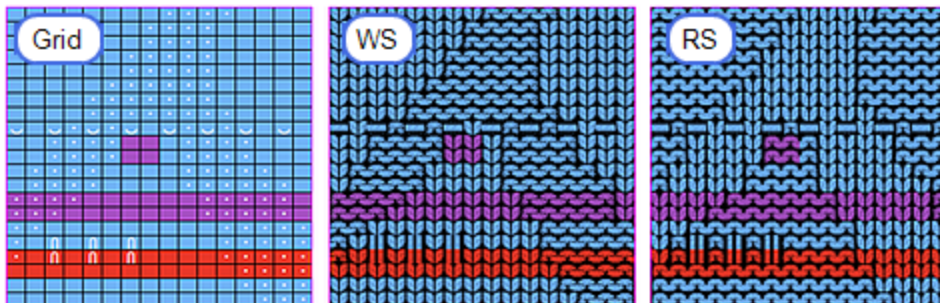


Error in pattern .

There is more than one type of smart symbol at row 8.

Right side facing means that the right side is facing the knitter while they are seated at the knitting machine. Wrong side facing means that the wrong side faces the knitter. Right side refers to the finished effect side, which is the outside of a finished garment piece. Wrong side is the other side. Right and Wrong side facing are terms commonly used outside the textiles industry. These terms are not to be confused with technical face or technical back.

DesignaKnit will automatically flip the pattern for downloading if this is necessary, based on whether the method is Right or Wrong side facing texture and the chosen knitting machine. The background selecting stitch will be set to Knit or Purl accordingly and the other symbols will be deselecting.



An example of a stitch pattern is shown on the left. Although the stitch pattern markings stays the same in Grid view, the fabric views change, depending on the method of knitting that is chosen. Wrong side facing texture results in the second image (where Knit is the background stitch on deselecting needles), and Right

side facing presents the third image (where Purl is the background stitch on deselecting needles).

Right / Wrong side facing texture methods may contain a number of sections, each consisting of a set of rows of any one of the techniques mentioned above (Tuck, Weave etc.). The pattern is designed by using the Smart Symbols which control the needle selection. These symbols enable the needles to be arranged correctly for downloading, indicate the carriage settings in Interactive Knitting where necessary and include relevant information in the printed instructions. Other symbols may be included, but they are for memo purposes and will not affect the needle selection.

As Right / Wrong side facing texture methods are texture based, the use of colors in the stitch patterns is different to Fair Isle or Jacquard. Right / Wrong side facing texture patterns can contain as many colors as wanted, without affecting the selection status of the needles. Actual color changes are indicated in the Stitch Designer *File / Print / Colour changes* printout and are clearly visible in the *File / Print / Stitch pat template* printout if the "Colour" option is selected, but not in *File / Print / Pattern text*. It is important to know that there can only be one opaque color per row and DesignaKnit will present warnings when printing templates or in Interactive Knitting if this is not the case.

The opaque color indicates the knitting yarn. As transparent colors are informational, they can be included as single stitches or blocks of color to indicate that something needs to change on a particular row.

If the colors are arranged in a band or bands (as in the image above) they are clearly visible in Interactive Knitting, although some manual action is required to change to this color. If a Colour Changer is used, the colors need to be in bands of multiples of two, as the color can only be changed on one side of the work and the correct button on the Colour Changer will need to be pressed to switch to the desired one. If only some stitch cells are colored, Interactive Knitting will ignore them in favor of the main color of the row that is knitted.

Colours do not select needles and are not mentioned in text printouts. If a pattern has more than one color on any row, and its method of knitting is changed to RS or WS from any of the other methods, the informational message shown on the right appears. The change is accepted after "OK" is clicked.



This texture pattern contains no pattern of symbols, only of yarn colours. It will therefore not produce any needle selection. For texture knitting, please use the smart symbols that select or deselect needles (see Symbols Organizer, and Palettes / Convert Yarn Colour).

The selecting state of the needles depends on the Smart Symbols. Tuck, Slip and Weave Under symbols deselect needles, while Thread Lace and Weave Over select. For Right side facing textures, the Knit stitch is selecting, while the Purl stitch is deselecting and for Wrong side facing textures the Purl stitch selects, while the Knit stitch deselects. For a detailed description of all the symbols, the KnitWrite[®] font chapter in the Stitch Designer manual can be consulted.

The Brother Garter carriage can be used to design stitch patterns consisting of Knit and Purl stitches to draw a picture, much in the same way as a Fair Isle or Jacquard pattern uses colors. DesignaKnit can download the stitch pattern to the Brother knitting machine, which can knit it with the Garter carriage. On "Wrong side facing textures" the Knit side will be the effect side (front of the fabric). Any Purl stitches will be formed on selecting needles and the pattern will be flipped from left to right before downloading. On "Right side facing textures" the Purl side will be the effect side. Any Knit stitches will be formed on selecting needles and the pattern will not be flipped before downloading. This information is also used by Integrated templates ([See on page 173](#)).

## Summary

All method specific criteria are listed in the summary below:

Method	Criteria
Fair Isle <a href="#">(See page 131)</a>	Two colors can be worked simultaneously in a single row
	There must be one deselecting and one selecting color somewhere in the pattern
	A Fair Isle pattern can contain sections of texture pattern in which one Smart symbol can be used per row in addition to the main Knit or Purl stitch to create the texture
	The needles select according to the colors in the Fair Isle rows or according to texture Smart Symbols and if there is a mix, the Smart Symbols take precedence
	If a Garter carriage is used, the Purl stitch, as seen from the finished side of the fabric, is the selecting stitch
	The main stitch on the finished side of the Fair Isle fabric is Knit
Jacquard <a href="#">(See page 133)</a>	This method is color based and up to 6 colors can be specified in any one row
	Colours are separated and one fabric row will be formed by multiple passes of the carriage to work each color
	Smart Symbols cannot be used in a Jacquard pattern
Right / Wrong side facing texture methods <a href="#">(See page 134)</a>	Used for textured knitting where there is only one color in a row
	One selecting and one deselecting stitch type in each row
	Used for Tuck or Slip stitch patterns and garter stitch patterns which do not include a band or bands of Fair Isle
	Used for Lace stitch patterns
	If Tuck, Slip, Thread Lace, Weave or garter carriage symbols have been used the required carriage settings will be indicated in Interactive Knitting and in the printed instructions
	Purl stitches will be formed on selecting needles on the effect side of the fabric when using the Wrong side facing texture on Brother Garter carriage patterns
	Knit stitches will be formed on the effect side when the Right side facing method is used on Brother Garter carriage patterns
	Only one opaque color can be knitted in each row
	Transparent colors can be used for memo purposes

Method	Criteria
Intarsia <a href="#">(See page 132)</a>	Intarsia uses a separate ball or cone of yarn for each color area
	Yarns need to be laid across the needle bed and crossed between color areas to result in a smooth fabric without gaps
	No restrictions in the number of colors
	No restrictions in stitch types, including cables, although these techniques will need to be performed by hand
	Patterns can only be downloaded to the Silver Reed AG50 Intarsia carriage
	If downloaded, color instructions will be given, but stitch types will be ignored in Interactive Knitting

# Printing Shapes

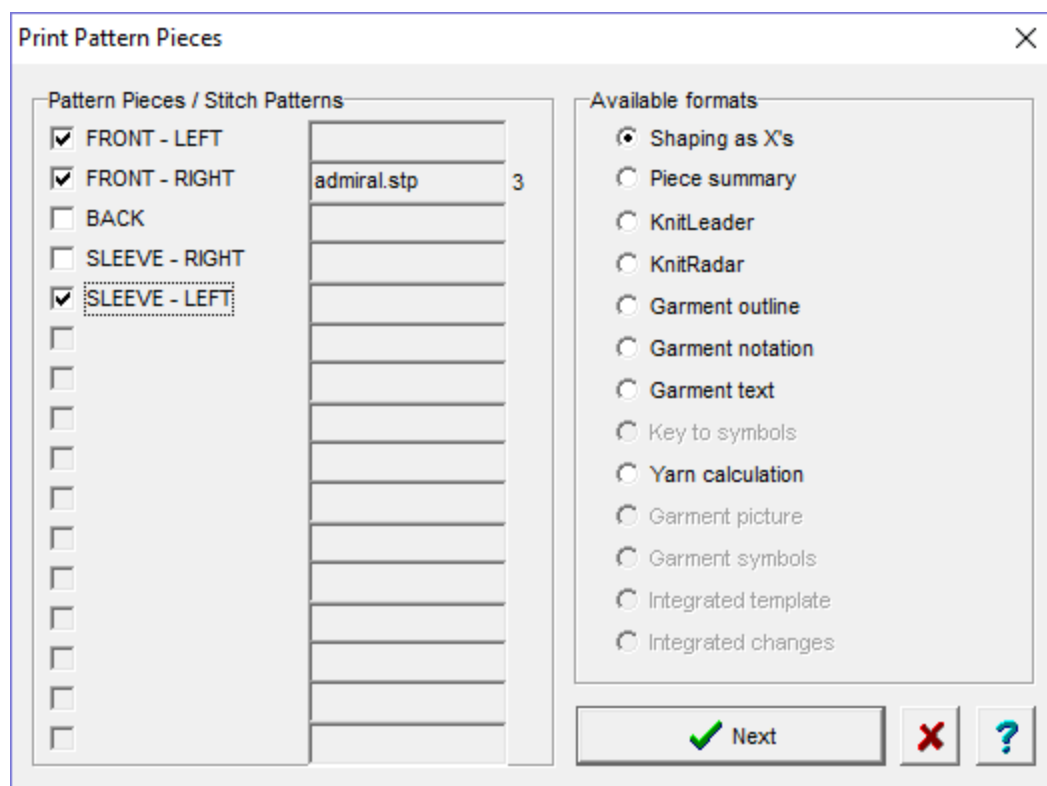
<b>Page Setup</b>	<b>139</b>
<b>Global Print Options</b>	<b>140</b>
<b>Copy to Clipboard</b>	<b>144</b>
<b>Save to Image File</b>	<b>145</b>
<b>Setup for chosen format</b>	<b>146</b>



 The menu option *File / Print* and the Print button in the Left Toolbar of Original Pattern Drafting, Standard Garment Styling and Stitch Designer as well as the *Shapes / Print Shapes* menu option of Stitch Designer can be used to print a wealth of different print formats of garment pieces and stitch patterns.

In Stitch Designer, if the integration between the stitch pattern and garment piece has changed, by for example moving the garment piece over the stitch pattern, the shape file needs to be saved before the changes are taken into account in the Print formats. If changes have taken place, appropriate prompts will be given to save the stitch pattern and the shape file.

When selected the "Print Pattern Pieces" dialog as shown below is presented. If a stitch pattern has been applied its name will be shown in the box to the right of the affected Pattern Piece.



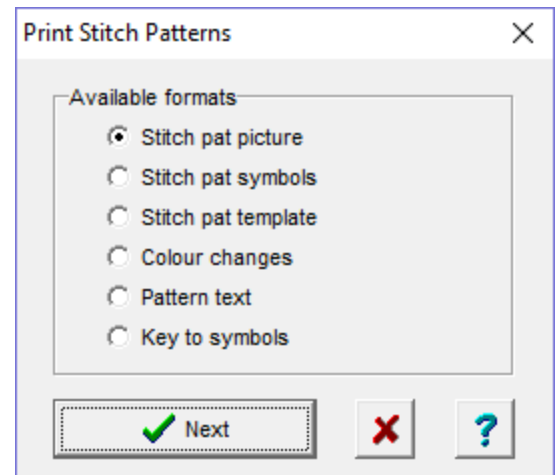
In this initial screen options are given to select pieces with their corresponding stitch patterns for printing. After making the selection and choosing one of the available formats on the right, "Next" can be clicked to proceed. Each option chosen leads to a different output. In all cases the "Page Setup" dialog as shown below is presented next.

Some of the "Available formats" options are grayed out unless ONLY pieces with "stitch patterns" are selected.

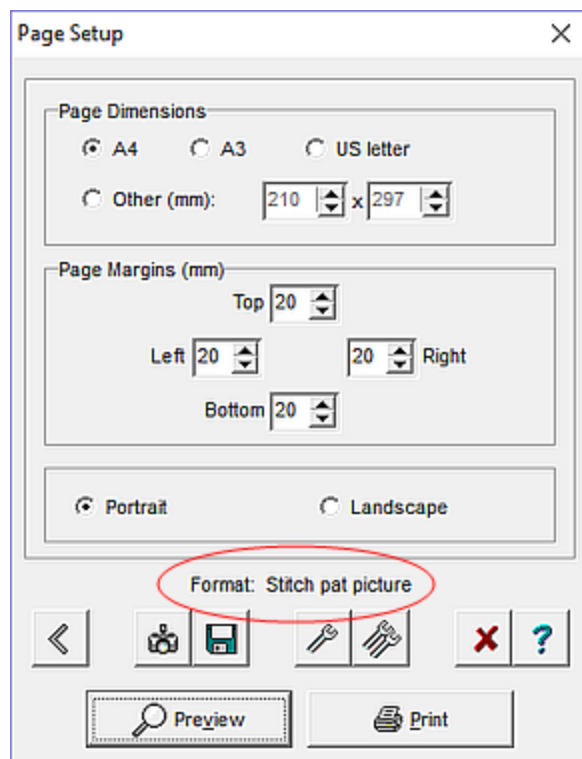


Using the *File / Print* menu option or the Print button on the Left Toolbar in Stitch Designer for a stitch pattern will present a smaller list of available print formats, as shown on the right. Where necessary, differences have been described in the text below, but in the main, the options for each print format are the same.

"Stitch pat template" is only available if a knitting machine with punch card capabilities has been selected.



## Page Setup



General options can be stipulated in this dialog, all of which are retained for future sessions.

"Page Dimensions" gives the option of printing to A4, A3 or US Letter format. Alternatively a custom page size can be entered to suit particular needs. This option can be used to preview printed instructions in a different format so they are easier to see on the screen. E.g., using 'A4' when previewing a template will show less of it on the screen, in a seemingly larger font, than using 'A3'. The "Other (mm)" reflects the sizes of the selected Page Dimensions but may also be used to create custom sizes. This feature can be used for making meaningful screenshots.

"Page Margins" are represented in mm and each value can be changed to suit requirements.

"Portrait" or "Landscape" can be chosen.

The chosen "Format" is displayed in the lower section of the dialog, which in this case is 'Stitch pat picture'. The button bar can be used to access a number of different options.



returns to the previous screen where different choices can be made of pieces and print formats.



copies the selected piece with all its settings to the clipboard ([See page 144](#)).



saves the selected piece with all its settings to a bmp (bitmap) file ([See page 145](#)).



displays the settings for the selected print format ([See page 146](#)).



displays the general print options that apply to all print formats (See page 140).



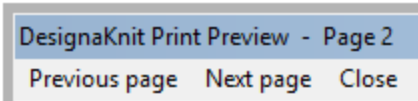
cancels the action, returning to the workspace.



opens context sensitive help which goes straight to the help section of the chosen print format. I.e., if "Shaping as X's" is the chosen format, pressing this Help button will go to help about "Shaping as X's".



can be clicked to view the result before committing to printing. It spans the full computer screen, but can be made smaller by double clicking in the blue title bar or clicking and holding the mouse cursor anywhere in the title bar and dragging it down. Double clicking the title bar again will return the display to full screen. "Previous page" and "Next page" are available if there is more than one page to be printed for the piece for which the instructions are currently displayed. Clicking "Close", or pressing the Esc key, will close the preview of the current piece, displaying the next if this is applicable.



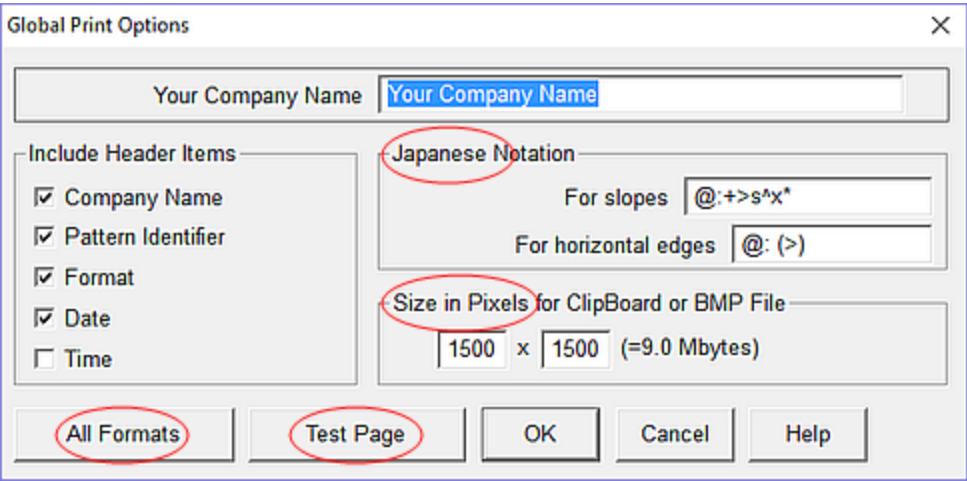
will print the work to a (Windows) system printer.

## Global Print Options

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When viewing this help file on the computer, the cursor may be hovered over the Camera and Disk symbols and clicked to go straight to these options.



When viewing this manual on the computer, the cursor may be hovered over the image. Where the cursor changes to a hand it can be clicked on as a quick way of getting to the relevant section.

Clicking the double wrench button will present the dialog shown on the left, in which a variety of options can be selected and changed. "Your

"Company Name" can be filled in and details of what needs to be included in the printout header can also be selected here. Any of these options can be changed at any time and will apply to all printouts in DesignaKnit from then on.

**Your Company Name**  
 basic shape Sleeve  
 Piece summary 08/08/2017

**Your Company Name**  
 bright (Knit method=F)  
 Stitch pat picture 08/08/2017

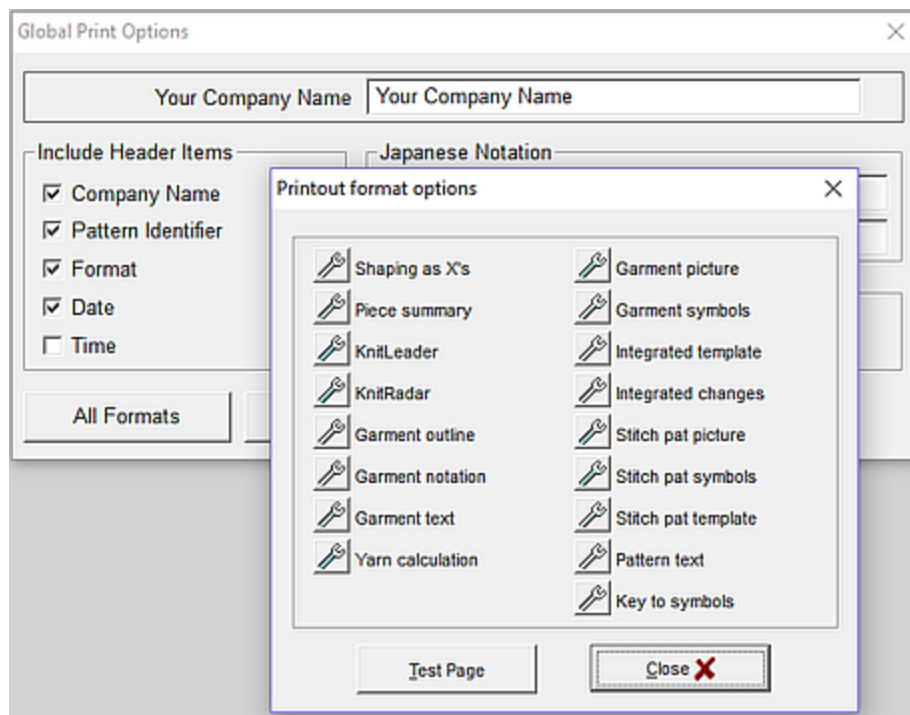
A couple of results of the options as shown above are shown in the images on the left for different print formats.

If a name had been filled in for Company name, it would have shown in the top line instead of "Your Company Name".

The middle line displays the "Pattern Identifier" and the bottom line contains the "Format" (Piece summary and Stitch pat picture) information. In the first image, as a shape file was chosen, both the shape file name and the current garment piece are shown, while in the second image, a stitch pattern was selected in which case the stitch pattern name and the knit method are displayed.

image, a stitch pattern was selected in which case the stitch pattern name and the knit method are displayed.

## All Formats



Clicking the "All Formats" button in the Global Print Options dialog displays the "Print format options" from which each option can be chosen to modify. If the desired settings are known, it may be quickest to adjust them here, as all the options are listed together.

Alternatively, each format to be changed can be selected on the first "Print Option" screen (Shaping as X's, Piece summary, Knit Leader etc.), after which "Next" and the single wrench option can be clicked. This opens the options for that particular format directly. Either way the same dialogs are presented in which to make changes.

Test Page

Test Page

Print Test Page

Current unprintable margins (mm)

Top

0

Left

0

1

Right

Bottom

1

Printer Compensation Factors

Horizontal

1.0000

Vertical

1.0000

OK

Cancel

Help

"Test Page" will print a generic test to see that the printer returns a printed box measuring 15 cm by 15 cm exactly. If this is not the case "Printer Compensation Factors" on this Test Page screen can be used to compress the whole graphic slightly horizontally or vertically, until the printout is correct. This may be necessary for Mylar or reader card templates. If the necessary adjustment is out of the 0.990 and 1.0010 range, it is possible that a more up to date printer driver is required.

The "Current unprintable margins" displayed in the center are there for information only and cannot be changed.

Japanese notation

Japanese Notation

For slopes

@: +>s^x*

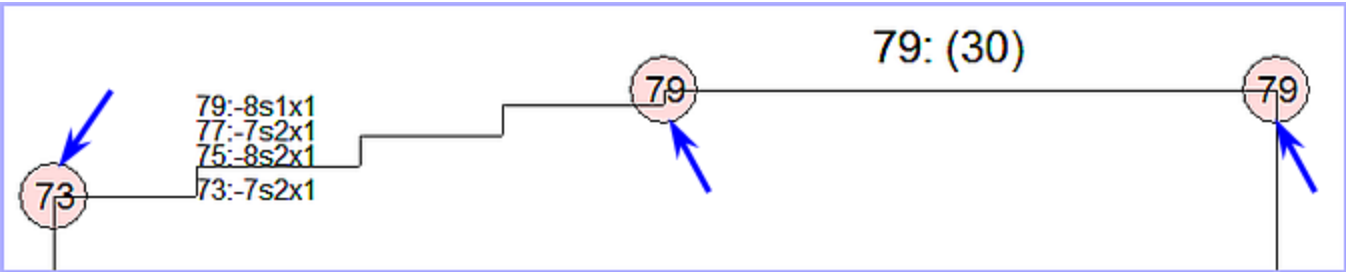
For horizontal edges

@: (>)

This is where the format of notation on the printouts can be specified. This can be set differently for slopes and for horizontal edges, depending on requirements and preferences. The default settings are as displayed on the left. The settings in this section are used in the "Garment Notation" format (See on page 153). The image shown below is the result of using the

notations as they are set in the defaults. Note that markers (see blue arrows) have been set to display in the Garment Notation options to clarify the picture. The markers show the row numbers. The "For horizontal edges" notation is on the straight edge on the right, the "For slopes" notation on the left, in a straight column.

The "For slopes" box can contain up to a maximum of 17 characters. The "For horizontal edges" is limited to a maximum of 12 characters.



Each symbol represents a value or text and translates to a certain notation for printouts, which can be put together in a suitable form. Below is a table with symbols that can be used. Different text may be used to customize the output, e.g., instead of using just 'e' to indicate every, the word 'every' may be entered in the field.

symbol	description	property
@	row number at which shaping starts	value
+	cast on or increase	value
-	cast off or decrease (not shown as a separate symbol)	value
>	number of stitches to cast on / increase or cast off / decrease	value
^	number of rows to knit straight	value
*	number of times an action needs to be repeated	value
:	punctuation (to help readability)	text
e	every	text
r	row	text
s	indicates stitches (to help readability)	text
x	times (to help readability)	text
()	can be used to help with readability	text
	spaces can be used to help with readability	text

The "+" symbol will result in either a "+" or "-" value when printed, depending on whether increases or decreases are called for.

Text will print exactly as it is entered here, and is not restricted to the text shown in the table above. However, more text used will mean it takes up more space on the printout which may hinder rather than help. The setting can be manipulated at any time and is remembered for all printouts.

Value will translate the symbol into the actual value of the pattern, as shown in the examples below. The flexibility means that some experimenting may be necessary to arrive at the optimum result.

Examples for slopes:

This notation	prints as:	and translates to:
@:+>s^x*	24:+1s9x6	At row 24 increase 1 stitch, knit 9 rows. Do this 6 times
@:+>s^x*	148:-1s2x4	At row 148 decrease 1 stitch, knit 2 rows. Do this 4 times

This notation	prints as:	and translates to:
@: + > s ^ (x*)	24: + 1s 9 (x6)	Identical to above, but with spaces and () to define actions
@: +1s e^ rows (*x)	24: +1s e9 rows (6x)	More readable but takes up more space on the pattern

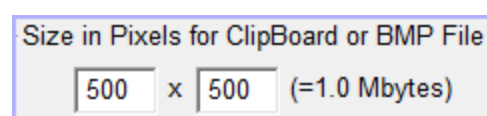
Examples for horizontal edges:

This notation	prints as:	and translates to:
at row @: (>)	at row 150: (12)	at row 150 cast off 12 stitches
	at row 0: (148)	at row 0 cast on 148 stitches

## Size in Pixels

The "Size in Pixels for ClipBoard or BMP File" setting is used when making copies to the clipboard or to a .bmp image file in order to save an image of the work separately. This is useful for pasting into notes or for sending to third parties, such as pattern publishers. The size in pixels can be adjusted to one that is suitable. The default size is 1500 pixels by 1500 pixels which results in an image that roughly takes up 9 MB of memory.

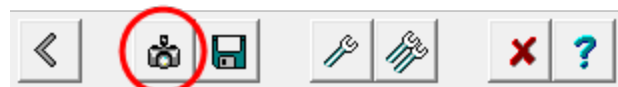
Application programs such as DesignaKnit cannot use memory as efficiently as printer drivers do, and entering a pixel size of more than a couple of thousand is likely to cause the program to take a very long time in trying to produce even a medium quality image. High resolution images may nevertheless be obtained by installing a PDF printer as an alternative to the physical printer(s). This enables any printed output to be sent to a PDF file instead of to a physical printer. The PDF printer can be selected instead of the normal printer each time anything is printed, including any of the DesignaKnit print formats. The resolution may be set using the PDF printer driver software to the highest resolution levels required for pattern publishing.



Changing the values in the "Global Print Options" dialog ([See on page 140](#)) will affect the resolution of the image and the size of the file in memory. E.g., entering 500 x 500 instead of the default 1500 x 1500 will result in a smaller file size (1 instead of 9 Mbytes) but the image will not be as clear in software such as Word, Paint or any other third party

software. Generally the default setting will result in a clearly defined image.

## Copy to Clipboard



When the camera button is clicked the piece that is ticked in the "Print Pattern Pieces" dialog is placed on the Clipboard. If another application, such as a word processor, desktop publisher, or other program that can handle bitmap images is opened the copied image may be copied directly into this

using the File, Copy function or "Ctrl-V", depending on what this application uses. The contents of the Clipboard

are available until they are overwritten by any other action that places contents in there, whether from DesignaKnit or other programs.



This option will work for the selected piece! If more than one piece has been ticked, the last one will be copied to the clipboard. To copy the others they have to be ticked in turn, copied to the clipboard and dealt with one by one.

What is copied to the clipboard depends on the options that have been selected.

- If Shaping as X's, Garment outline or another picture based format has been chosen, clicking the camera button will make a picture style copy, with color, white or gray stitch pattern, with or without row numbers, exactly as has been set in the relevant options.
- If Piece summary, Yarn calculation or another text based output has been selected, the resulting clip will be in text, and can be manipulated as such after it has been pasted into another program. Whereas the result for say Yarn calculation can easily be manipulated as text, it depends on the chosen font whether the table is lined up neatly or not.
- If Stitch pat picture, Stitch pat symbols or Stitch pat template have been selected in Stitch Designer, the contents of the clipboard will be an image, whereas Colour changes, Pattern text and Key to symbols will result in text.

## TIP!

If pasting a text based clipboard cutting to a word processor, a mono spaced (fixed width) font such as Courier or Consolas should be selected so the text is lined up neatly.

Even if a preview would show a print over several pages, the Copy to Clipboard utility will print the entire piece fitted into the size of the image as set in Size in Pixels box. If the resulting picture is larger than the print page it is pasted into, the behavior of the word processor will take over to fit the image within the page.

## Save to Image File



Similar to the Copy to Clipboard Option in the way that its information is derived from the chosen piece and settings, this option will save the result directly into a BMP (bitmap) file which can be used to insert into other programs like a word processor, paint program or desktop publisher. If more than

one piece has been selected DesignaKnit offers each of the pieces to be saved as a .bmp file with a different name.

The default Windows location where images are saved is offered and a default file name "bmp00001.bmp" is presented. The name and location of the file can be changed at this point. Every time the file is saved under this default name, the number will be incremented. Clicking "Save" will complete the save action(s) after which the program returns to the "Page Setup" dialog.

## TIP!

If a different name is chosen to save the file(s), ensure the name has a number at the end in order for the DesignaKnit to be able to save more than one piece under incrementing file names.

Both Image output like "Shaping as X's" and text based output like "Yarn calculation" are saved as image files when using this option. Whereas the result for say, yarn calculation is neatly lined up and easy to read, it cannot be manipulated like a text file. Once saved the image can be used as it is, or opened in a Picture manager program such as Windows MSPaint, Irfanview, Photoshop etc. to be manipulated further and saved under a different name and format. For more information about file locations ([See on page 185](#)).

## Setup for chosen format

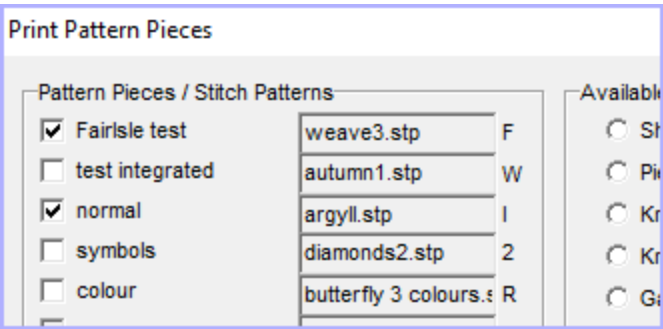
Shaping as X's .....	147
Piece summary .....	149
KnitLeader .....	151
KnitRadar .....	152
Garment outline .....	152
Garment notation .....	153
Garment text & Stitch pattern text .....	154
Key to symbols .....	157
Yarn Calculation .....	158
Garment picture & Stitch pat picture .....	162
Garment symbols & Stitch pat symbols .....	164
Integrated template .....	166
Integrated changes .....	179



When a format has been selected the single wrench button can be clicked to change options of that particular format. Alternatively, they can all be modified in the "Global Print Options" ([See on page 141](#)) in one sitting if the desired settings are known, saving time. The advantage of using the

Setup per chosen format is that options can be altered, previewed and fine tuned until the printout is satisfactory.

Each format results in a different printout and can be fine tuned to requirements. Not all options are relevant in all cases and the resulting printouts are dependent on the options chosen for the design, such as machine or hand knitting, stitch pattern applied or not, different knitting stitches and color symbols defined and applied in Stitch Designer, knitting method employed and many more variables.



On first accessing this option the first garment piece in the list is ticked. Pieces in the shape file can be deselected and selected in turn or more than one piece can be ticked in which case one piece after another will display on "Preview" of the selected Print format. If other pieces than the first one have been chosen, this selection is remembered by DesignaKnit until a different shape file is opened.

If stitch patterns are integrated their names are shown next to each garment piece and their method of knitting

is indicated by the letter or number to their right. In this example a test 'garment' was created in which each piece has a different stitch pattern with a different method.

Where applicable a generic image has been supplied to show the result of a particular printout, using a square piece with a pattern applied. More examples of printouts can be found on [Soft Byte Ltd](https://soft-byte.co.uk/designaknitprintouts.htm) (<https://soft-byte.co.uk/designaknitprintouts.htm>).

## Shaping as X's

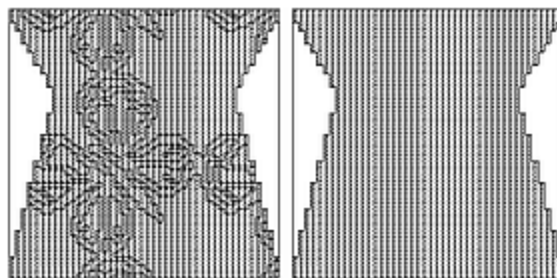
This printout gives a good 'at a glance' indication of the shape and number of stitches and rows of each piece because each stitch is represented by an X against a gray background of the shape. A variety of settings can be altered in the Options screen by clicking the single wrench button. Each option is described below.

"Stitch Representation" and "Stitch Colour" are grayed out in this dialog as they are irrelevant to this printout. These options are very useful to the "Garment picture" printout ([See on page 162](#)).

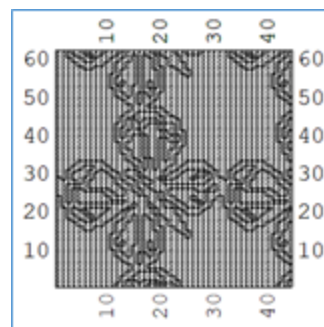
- **Scaling** - "Fit to a page" or "% of actual size" can be experimented with for the most optimal display on the print page. If the option "Fit to a page" is chosen, each selected piece will print onto a separate page and each page will display in turn when either "Close" is clicked or the Esc key is pressed. The X's may not print clearly but the shape of the piece is clearly displayed on the page. If 100 is entered in the "% of actual size" box, the piece(s) will print to full size and will, depending on their actual size, print over several pages that can be lined up and taped together to arrive at a full scale paper printout.
- **Stitch Aspect Ratio** - selecting "True" returns a shape based on the tensions set. Stitches may be square or rectangular depending on proportions of the tension and the printout will be proportionally correct. Selecting "Square" supposes each stitch to be a square, resulting in a printout that might not be to actual proportions. E.g., if the tension is set to 7 stitches and 10 rows per inch, the X's in "True" will appear rectangular, in "Square" they will be square.

- **Main Grid Thickness** and **Grid Divisions** - the main grid divisions are set to the size specified in *Options / Grid Division Size* in Stitch Designer. If this is set to e.g., "10" the grid lines will appear every 10 stitches and 10 rows. The grid divisions can appear as square or rectangular, depending on the tension settings and / or the setting of "Stitch Aspect Ratio". The "Main Grid Thickness" indicates the thickness of each line, 0 being thinnest.

- **Colour Demarcation Thickness** - only makes a difference to the printout when pieces with a stitch pattern have been selected. It will then trace a black line around each color depending on the thickness chosen. 0 means there is no line, in which case the stitch pattern will be invisible as in the second image on the right. Choosing a value between 1 and 3 will show up the stitch pattern, as shown in the first image on the right. As shaping with X's is concerned with shaping and not the stitch pattern, the X's are on a gray stitch background, while the shape itself is shown against a white background. The color of the demarcation lines will be the same as the grid colours that are chosen in the stitch pattern that is used, as explained in Colour Scheme in the Stitch Designer manual. In this example, the grid lines were black, but they could have been red, blue, green or even white. If they are white and the stitch pattern contains white yarn and / or a white background, the grid, and therefore the demarcation lines, will be present but not be visible.

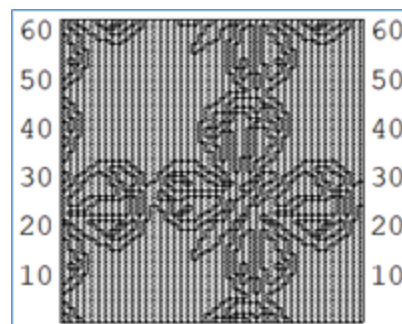


- **Stitch Colour** - is not applicable to Shaping as X's and is therefore grayed out.
- **Stitch Numbering** - can be set to different numbering conventions. Knitting machines generally use numbering to spread out from a center stitch in both directions. Hand knitting usually favors numbering from left to right. The example on the right shows stitch numbering in addition to row numbering. In this case the 12345 stitch numbering convention was ticked at a display size of 50%, resulting in showing stitches 10, 20, 30 and 40. More stitch numbers will be shown if the pattern is viewed at actual size.

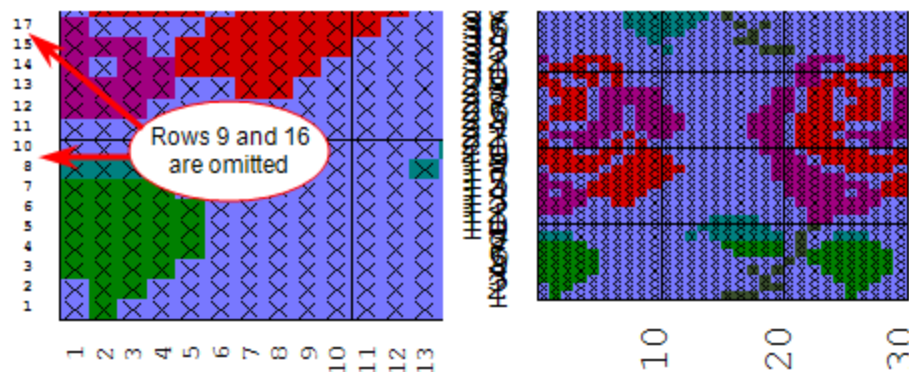


- **Miscellaneous** - "Row numbering" can be switched on or off to display row numbers on the printout. The "Inverted left to right (for machine knitting)" setting can be used to flip the stitch pattern horizontally so that the printout can be viewed from the finished or reverse side of the knitting, as shown on the right. This option is disabled and grayed out for hand knitting. Ticking "Omit duplicate rows" will switch on "Row numbering" automatically and can make it easier to read the pattern.

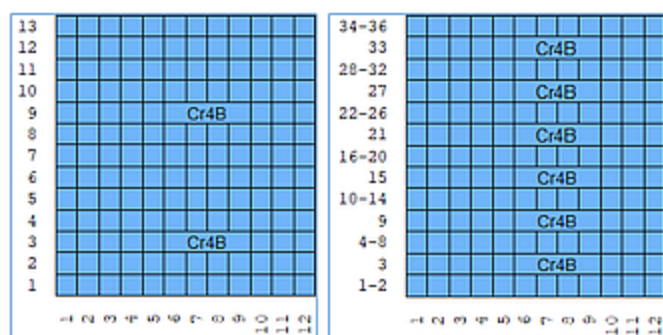
A combination of ticking "Row numbering" and "Omit duplicate rows" results in a printout showing only the rows where changes take place. This can be a more concise printout and very useful if the proportional view is not needed, as shown below.



The leftmost image below shows a detail of a stitch pattern on a garment piece. Row and stitch numbering were ticked as well as a Colour Demarcation thickness of "1" to show where the color areas will be. "Omit duplicate rows" was ticked to produce the second image, showing how notation and image change for the affected rows. Some of the shaping, which happens further up in the piece, is now visible.

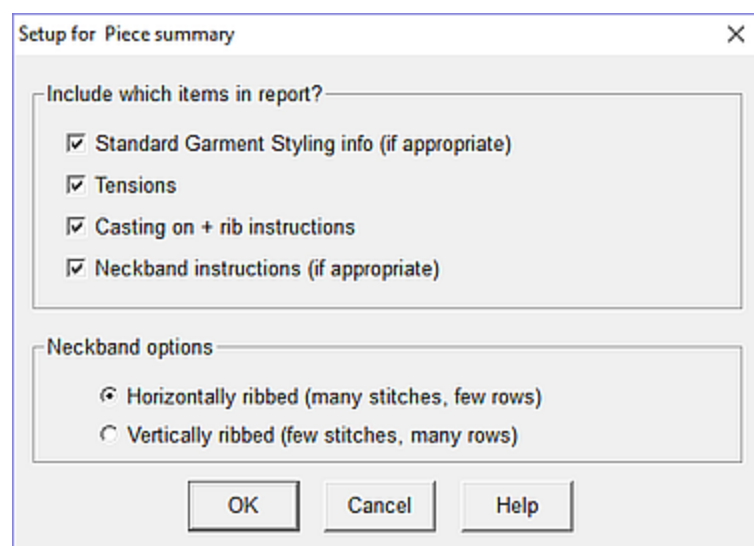


When "Row numbering" and "Omit duplicate rows" are combined it is possible that the row numbers are printed so closely together that they become unreadable (see rightmost image above). This is a result of the "Scaling Settings" and adjusting this to a larger or even 100% size will display the numbers readably as shown in the middle image.



The option to "Omit Duplicate Rows" can also be very useful for patterns with stitch cables, as the rows in between the crossings are repeats that need no further instructions. The example on the left shows part of the same cable pattern before and after ticking the "Omit duplicate rows" option.

## Piece summary



This option prints a summary of the properties of the selected pieces including rib, cuff and neckband information that is not displayed in any other printouts, as well as some information that is applicable to the entire garment. In addition to the tensions used, any optional information that was typed in the notes of the "Tensions" dialog like knitting machine settings, needle size, who it was designed for etc., will be printed.

Rib, cuff and neckband instructions ([See on page 204](#)) are only detailed in "Piece Summary"

Any or all of the options can be ticked to be included in the report. When selections are made and "OK" is clicked, the "Preview" option returns something similar to the images below.

If a garment originates from a Standard Garment Styling design, the printout will include the body measurements that it is based on. "Casting on + rib instructions" and "Neckband instructions (if appropriate)" are applicable only to garments that have originated as Standard Garment Styling garments, where these properties can be defined. This information will stay with the garment pieces, whether or not they have later been altered in Original Pattern Drafting.

**Your Company Name**  
**baby cardigan BACK**  
**Piece summary 22/07/2019**

Garment type	:Cardigan (Female)	Info based on Standard Garment Styling	
Sleeve type	:Straight		
Neck style - front	:Round		
Neck style - back	:Round		
To fit Chest	: 47.0 cm	+ ease	4.6 cm
To fit Waist or hip	: 51.6 cm	+ ease	0.0 cm
To fit Nape to garment length	: 27.9 cm	+ ease	0.0 cm
To fit Arm length	: 23.1 cm	+ ease	0.0 cm
To fit Upper arm	: 15.0 cm	+ ease	6.1 cm
To fit Wrist	: 10.9 cm	+ ease	5.6 cm
To fit Shoulder to shoulder	: 19.0 cm	+ ease	0.5 cm

Main Tensions            30.00 Stitches & 40.00 Rows per 10 cm  
 Rib, Cuff, and Neckband Tensions 33.00 Stitches & 44.00 Rows per 10 cm

Cast on LN39..RN39.  
 Knit 9 rows of rib (2.0 cm).  
 If necessary, knit an additional row to put carriage at right.  
 Knit preselect row.  
 Set RC to 0.

If a garment is purely designed in Original Pattern Drafting, garment type and body measurements are not available and the information that is encased in the red rounded rectangle in the image on the left will be absent.

Piece summary displays information for hand and machine knit garment pieces and is printed for whichever method of knitting has been chosen at the time of accessing Print options.

The knitting instructions will display which needles are used for casting on, where the carriage needs to be (or how many stitches to cast on for hand knitting) and how many rows of rib need to be knitted for Standard Garment Styling garment pieces that include rib and have not been altered in Original Pattern Drafting.

**Knit rib if any.**

If pieces have been altered in Original Pattern Drafting, rib information is no longer available and the "Knit rib if any" instruction appears directly below the casting on information.

If ribs, cuffs or neckband are desired for Original Pattern Drafting garments they need to be added as separate pieces.

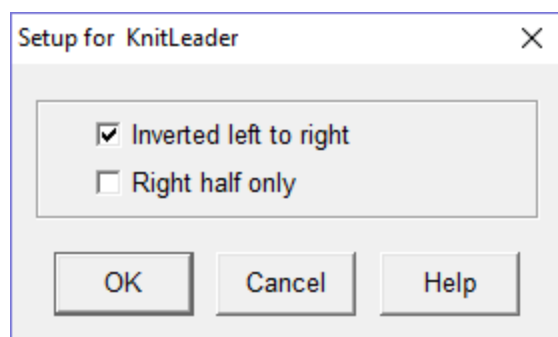
If a garment was designed in Standard Garment Styling, not altered in Original Pattern Drafting, and includes a neckband, this information will be printed in the Piece Summary on every page if the "Neckband instructions (if

appropriate)" option is ticked. Selecting "Horizontally ribbed" or "Vertically ribbed" Neckband results in different knitting instructions, as shown in the images below.

HORIZONTALLY RIBBED NECKBAND:		
RIB SECTION	DIMENSIONS	INSTRUCTION
LEFT SIDE	23.8 x 1.3	Pick up 78 stitches + knit 6 rows rib.
LEFT FRONT NECK	9.7 x 1.3	Pick up 32 stitches + knit 6 rows rib.
BACK NECK	11.5 x 1.3	Pick up 38 stitches + knit 6 rows rib.
RIGHT FRONT NECK	9.7 x 1.3	Pick up 32 stitches + knit 6 rows rib.
RIGHT SIDE	23.8 x 1.3	Pick up 79 stitches + knit 6 rows rib.
	=====	=====
TOTALS	78.3	259

VERTICALLY RIBBED NECKBAND:		
RIB SECTION	DIMENSIONS	INSTRUCTION
LEFT SIDE	23.8 x 1.3	Cast on 4 stitches + knit 104 rows rib.
LEFT FRONT NECK	9.7 x 1.3	Cast on 4 stitches + knit 43 rows rib.
BACK NECK	11.5 x 1.3	Cast on 4 stitches + knit 51 rows rib.
RIGHT FRONT NECK	9.7 x 1.3	Cast on 4 stitches + knit 42 rows rib.
RIGHT SIDE	23.8 x 1.3	Cast on 4 stitches + knit 105 rows rib.
	=====	=====
TOTALS	78.3	345

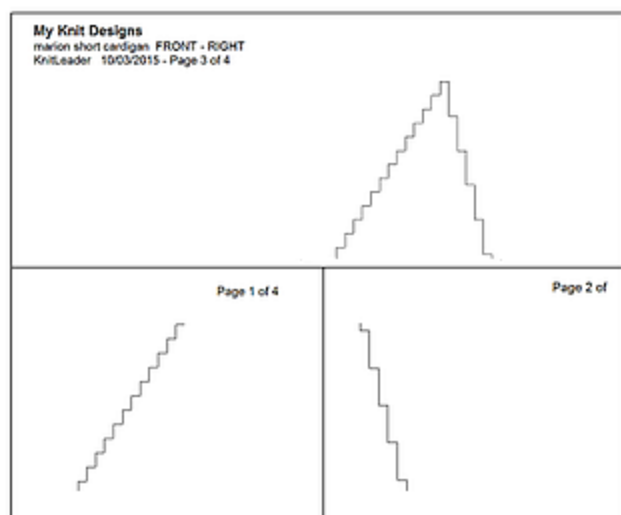
## KnitLeader



A KnitLeader is a 100% size printout of the design shape, which can be inserted between the guides of a knitting machine. It guides the knitting process and helps to see when to increase or decrease.

Either, both or none of the options can be ticked. Depending on the paper size used, the resulting prints may need to be lined up and taped together to make the complete pattern. "Inverted left to right" can be ticked to flip the stitch pattern horizontally so that the printout can be viewed from the finished or reverse side of the knitting, as required.

The option to print the right half only is useful with symmetrical pieces in order to fit the printout more easily on the guides.



If markers need to be shown, the "Garment Outline" print type may be used instead. On the left, a few 'pages' have been added to show what printouts from the KnitLeader screen could look like.

## KnitRadar

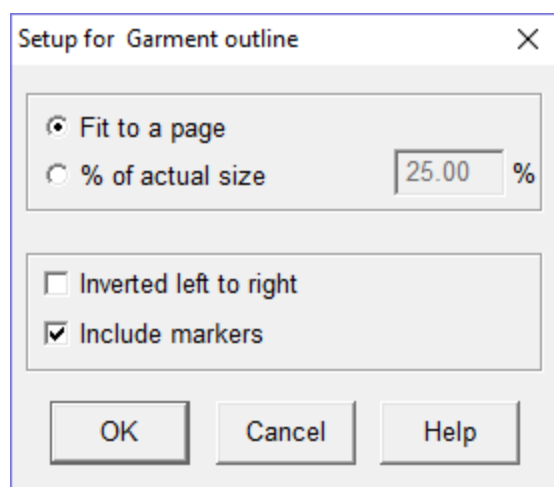
A KnitRadar is identical to a KnitLeader, except that it prints out at 50% of the actual size.



Either, both or none of the options above can be selected. Depending on the paper size used, the resulting prints may need to be lined up and taped together to make the complete pattern. Inverted left to right flips the piece.

The option to print the right half only is useful with symmetrical pieces in order to fit the printout more easily on the guides. If markers need to be shown, the "Garment Outline" print type may be used instead.

## Garment outline



This option can be used to print a full scale version of the pieces or a simple outline to scale. Depending on the paper size used, the resulting prints may need to be lined up and taped together to make the complete pattern. Alternatively, print sizes can be manipulated until each piece fits on a page.



The options on the "Setup for Garment outline" on the leftmost image were used to produce the example shown here.

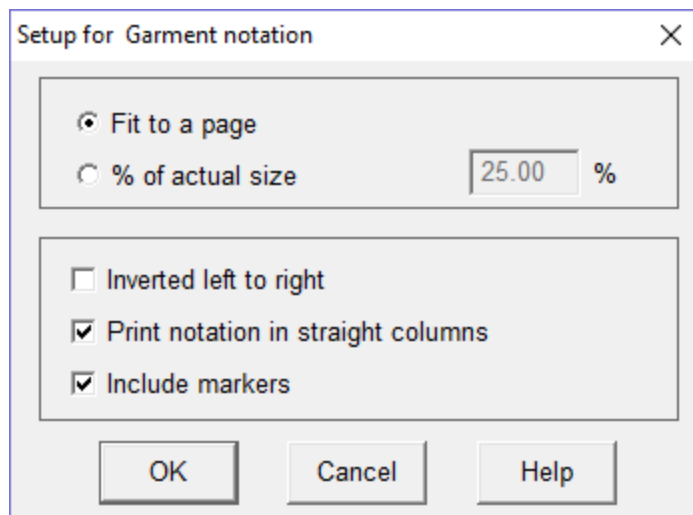
"Fit to a page" can be selected to get each piece fitted to the page size that has been chosen in the main print options screen (A4, A3, Letter or custom size). Alternatively the piece may be printed as a percentage of the actual size.

"Inverted left to right" can be used to flip the stitch pattern horizontally so that the printout can be viewed from the finished or reverse side of the knitting, as required.

The "Include markers" option prints any yarn markers that have been added into the piece while designing. Yarn markers can be used in a variety of helpful ways, such as marking additional points while blocking, marking color changes or

matching up garment pieces when they are being fitted together. The 'baby cardigan' example above includes markers, which are shown as little squares.

## Garment notation

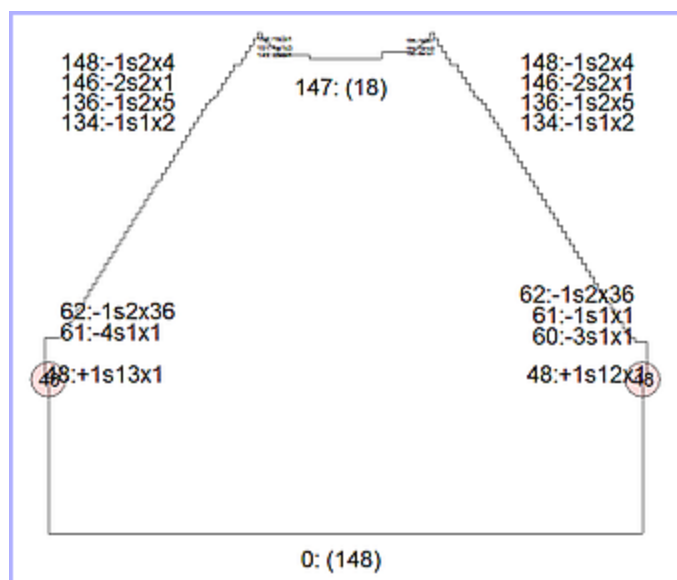


This option results in a printout of the knitting instructions superimposed on an outline of the garment piece, based on the settings of "Global Print Options" ([See page 142](#)).

The most common Setup is to select "Fit to a Page" and "Inverted left to right". This last option can be used to flip the stitch pattern horizontally so that the printout can be viewed from the finished or reverse side of the knitting, as required.

"Print notation in straight columns" may make the notation clearer. Not ticking this box can result in notations running through each other as they follow the curves of the piece.

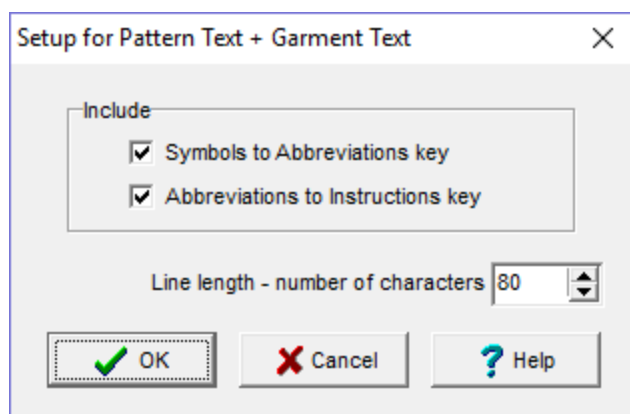
Ticking "Include markers" will print any yarn markers that have been added into the piece while designing, to clearly show where e.g., seams need to be joined, where endpoints on the body for a drop shoulder sleeve buttonholes are located etc.



An example of a printout is shown on the left, based on the default notation of @:+>s^x* for slopes and @: (>) for horizontal edges.

"Print notation in straight columns" and "Include markers" were both ticked.

## Garment text & Stitch pattern text



**Pattern Text** - applies to stitch patterns only and contains instructions to knit one repeat of the stitch pattern, without shaping. It can be accessed by using *Print / Pattern Text* and *Shapes / Print Shapes / Garment text* in Stitch Designer.

**Garment Text** - applies to garment pieces and prints step by step knitting instructions for the selected piece, including shaping and stitch pattern instructions for all required pattern repeats. It can be accessed by using *Print / Garment text* in Original Pattern Drafting and Standard Garment Styling.

The setup screen, as shown on the left, is identical for each of these options. The two "Include" options are only available if a stitch pattern is involved, either because it is integrated with the current garment piece or if it is printed on its own. They can be ticked or unticked as required (See also [Key to symbols on page 157](#)).

The default number of characters for the line length is set at 80 to fit A4 and Letter size paper, but can be adjusted if required.

Garment Text does not include information pertaining to ribs, cuffs and neckband that may have been included in Standard Garment Styling and if this information is needed, Piece summary ([See page 149](#)) needs to be printed separately and read together with these printouts.

(Stitch) Pattern and Garment Text are unavailable for Jacquard and the warning message shown on the right will be displayed if it is attempted. As each yarn is



Pattern Text and Garment Text printouts are not available for stitch patterns that have a Jacquard knitting method.

knitted by one pass of the carriage and multiple passes of the carriage make up one row of knitting, a printout could only be confusing. When a Jacquard pattern is downloaded to the knitting machine, color separation is taken care of automatically.

Casting on instructions are given, followed by instructions for each row, taking shaping into account where necessary. The instructions will reflect if rows are to be knitted identically. What is actually printed depends on options that have been defined here, elsewhere in the program and the method of knitting. Stitch symbols and colors will only print insofar as they are present and defined.

Yarn symbol	Yarn name
A	Blue
D	Green
E	Turquoise
F	Cerise
B	Red
G	???
C	Pink

Yarn information (see on the left) will be included automatically if more than one color exists in the pattern and each has been assigned a Yarn Symbol.

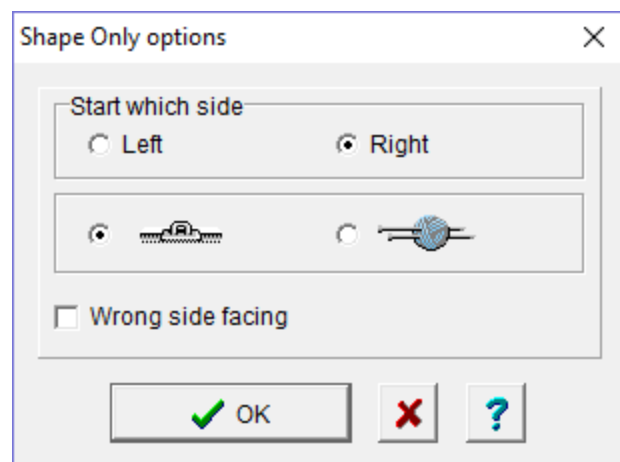
Yarn symbols and stitch symbols are different, with Yarn symbols referring to colors of the yarn, while stitch symbols refer to the knitting stitches and techniques used like Knit, Purl, Tuck etc.

If not all colors have been assigned a Yarn Symbol, the message as shown on the right will appear. Yarn Symbols can be assigned in Stitch Designer by using the *Palettes / Yarn Symbols* menu option, using letters, numbers or symbols to distinguish one from another. Colour names can be entered in *Palettes / Names*. If both are filled in for all colors that are used, all information will be included. If a color name has not been entered, it will be represented by "???", as shown above, where Yarn symbol 'G' has not been assigned a Yarn name.



Yarn symbols have not been assigned for all the yarn colours used in the pattern, therefore colour information will not be included in the printout (see Palettes / Yarn symbols).

More information about setting up these symbols is given in the Stitch Designer section of the manual.



**Garment Text** - the "Shape Only options" dialog will be displayed for pieces that do not have an associated stitch pattern, when clicking on "Preview", after exiting the options screen.

Hand or Machine knitting can be switched to as well choosing whether the fabric is to be Wrong side facing (machine knit, as shown on the left) or whether Row 1 is the wrong side (hand knit).

Clicking "OK" on the "Shape Only options" dialog displays a preview. If more than one piece has been selected to be viewed or printed in the previous steps each one will be displayed subsequently, offering the "Shape Only options" screen every time it is appropriate so options can be adjusted if needed. For those pieces that are integrated with a stitch pattern, where more than one color is used and Yarn Symbols have been assigned to all used colors, this information is automatically included in the printout for each row.

The "Shape Only options" screen is displayed only for pieces without an integrated stitch pattern.

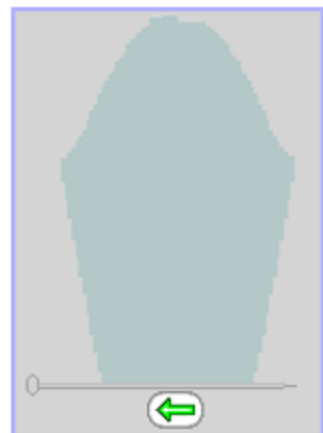
Some examples have been worked out below. To make the printouts easier to follow, the corresponding Interactive Knitting "Piece Overview" Progress Window has been shown to the left of the Pattern Text information. In each case the work is shown at the start of knitting and can easily be identified as Hand or Machine knitting by the appearance of either a knitting needle or a knitting carriage at the bottom of the piece.

**Hand knitting:** If an **integrated garment piece** is chosen in which all the yarns have been given Yarn Symbols, color information will automatically be added to each row of the printout. In this example, after casting on 42 stitches, the first row has to be knitted with 3 stitches of Yarn (A), 1 stitch of (D), 7 stitches of (A) etc. until the end of the row. The second row has to be purled to achieve the intended stocking stitch, as the work needs to be turned so that the wrong side is facing the knitter. Each row of knitting is followed, changing the colors as indicated until row 7, where the first shaping instruction takes place: increase a stitch at each side of the work.



```
Cast on 42
R1:      K42.
        Yarn A(3), D(1), A(7), G(3), A(13), D(1), A(7), G(3), A(4).
R2:      P42.
        Yarn A(7), G(2), A(5), D(2), A(15), G(2), A(5), D(2), A(2).
R3:      K42.
        Yarn A(1), D(4), A(5), G(1), A(14), D(4), A(5), G(1), A(7).
R4:      P42.
        Yarn A(6), G(1), A(1), G(1), A(3), D(6), A(12), G(1), A(1), G(1), A(3)
        , D(6).
R5:      K42.
        Yarn D(7), A(1), G(1), A(15), D(7), A(1), G(1), A(9).
R6:      P42.
        Yarn A(5), D(4), A(1), G(1), D(7), A(11), D(4), A(1), G(1), D(7).
When knitting the next row: Inc 1 sts at start, Inc 1 sts at end.
R7:      K44.
        Yarn A(2), D(5), A(1), G(1), A(1), D(5), A(11), D(5), A(1), G(1), A(1)
        , D(5), A(5).
R8:      P44.
        Yarn A(2), E(1), A(1), E(6), A(1), G(1), A(2), E(3), A(9), E(1), A(1),
        E(6), A(1), G(1), A(2), E(3), A(3).
R9:      K44.
        Yarn A(7), G(1), A(3), E(6), A(14), G(1), A(3), E(6), A(3).
```

The same piece was used to produce a printout of a **Shape-only**, to be knitted in one color only. As there are no different yarns to be taken into account, the knitting instructions become much more concise, indicating to Knit and Purl rows alternately until shaping starts at row 7.



```
Cast on 42
R1:      K42.
R2:      P42.
Rows 3-6: Repeat rows 1 & 2.
When knitting the next row: Inc 1 sts at start, Inc 1 sts at end.
R7:      K44.
R8:      P44.
Rows 9-14: Repeat rows 7 & 8 (without the shaping).
When knitting the next row: Inc 1 sts at start, Inc 1 sts at end.
R15:     K46.
R16:     P46.
Rows 17-20: Repeat rows 15 & 16 (without the shaping).
R21:     K46.
When knitting the next row: Inc 1 sts at start, Inc 1 sts at end.
R22:     P48.
R23:     K48.
Rows 24-29: Repeat rows 22 & 23 (without the shaping).
When knitting the next row: Inc 1 sts at start, Inc 1 sts at end.
R30:     P50.
R31:     K50.
Rows 32-37: Repeat rows 30 & 31 (without the shaping).
When knitting the next row: Inc 1 sts at start, Inc 1 sts at end.
```

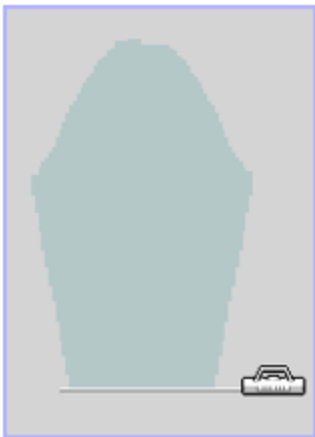
**Machine knitting:** If an **integrated garment piece** is chosen in which all the colors have been given Yarn Symbols, DesignaKnit will automatically add the color information to each row of the printout. This example uses a Fair Isle stitch pattern that is integrated with a sleeve garment piece. Each R(ow) describes exactly how many stitches of each yarn color are used.

In this example, after casting on 42 stitches, the color pattern of row 1 consists of 5 stitches of yarn (A), 1 stitch of (G), 7 stitches (A) etc. Shaping instructions are introduced at row 7.



```
Cast on 42
R1:      K42.
        Yarn A(5), G(1), A(7), G(3), A(13), G(1), A(7), G(3), A(2).
R2:      K42.
        Yarn A(4), G(2), A(5), G(2), A(15), G(2), A(5), G(2), A(5).
R3:      K42.
        Yarn A(3), G(4), A(5), G(1), A(14), G(4), A(5), G(1), A(5).
R4:      K42.
        Yarn A(2), G(6), A(3), G(1), A(1), G(1), A(12), G(6), A(3), G(1), A(1)
        , G(1), A(4).
R5:      K42.
        Yarn A(2), G(7), A(1), G(1), A(15), G(7), A(1), G(1), A(7).
R6:      K42.
        Yarn A(2), G(8), A(1), G(4), A(11), G(8), A(1), G(4), A(3).
When knitting the next row: Inc 1 sts at left, Inc 1 sts at right.
R7:      K44.
        Yarn A(4), G(5), A(1), G(1), A(1), G(5), A(11), G(5), A(1), G(1), A(1)
        , G(5), A(3).
R8:      K44.
        Yarn A(5), G(3), A(2), G(1), A(1), G(6), A(1), G(1), A(9), G(3), A(2),
        G(1), A(1), G(6), A(1), G(1).
R9:      K44.
        Yarn A(9), G(1), A(3), G(6), A(14), G(1), A(3), G(6), A(1).
R10:     K44.
        Yarn A(9), G(1), A(3), G(6), A(14), G(1), A(3), G(6), A(1).
```

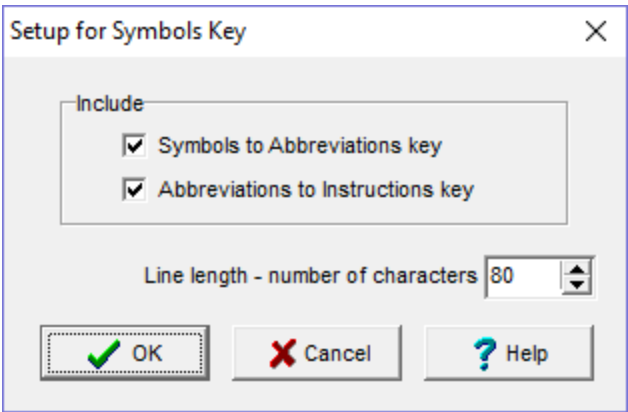
The same piece was used to produce a printout of a **Shape-only** garment piece, to be knitted in one color. As there are no different yarns to be taken into account, the knitting instructions become much more concise, showing how many stitches are to be worked in any one row. Shaping instructions start at row 7.



```
Cast on 42
R1:      K42.
Rows 2-6: As row 1.
When knitting the next row: Inc 1 sts at left, Inc 1 sts at right.
R7:      K44.
Rows 8-14: As row 7 (without the shaping).
When knitting the next row: Inc 1 sts at left, Inc 1 sts at right.
R15:     K46.
Rows 16-21: As row 15 (without the shaping).
When knitting the next row: Inc 1 sts at left, Inc 1 sts at right.
R22:     K48.
Rows 23-29: As row 22 (without the shaping).
When knitting the next row: Inc 1 sts at left, Inc 1 sts at right.
R30:     K50.
Rows 31-37: As row 30 (without the shaping).
When knitting the next row: Inc 1 sts at left, Inc 1 sts at right.
R38:     K52.
Rows 39-44: As row 38 (without the shaping).
When knitting the next row: Inc 1 sts at left, Inc 1 sts at right.
R45:     K54.
```

## Key to symbols

The Key to symbols option is available if all selected pieces have an integrated stitch pattern, otherwise it is grayed out.



"Symbols", "Abbreviations" and "Instructions" are defined in the Stitch Designer part of the program, although the basic stitches of Knit and Purl are defined as default and will print as "Abbreviations" and "Instructions" in all cases. If colors have been defined in the stitch pattern the symbols for these will also be printed by ticking these options.

It may be useful to have a separate printout of Symbols, Abbreviations and Instructions for reference during the knitting process, rather than include them in Pattern or Garment Text. One or both options have to be selected in this dialog whereas they can both be unticked in the Garment and Pattern Text dialogs.

Symbol	Abbreviation
(blank)	K
.	P
∩	T
∨	WU
λ	DecL
Abbreviation	Knitting instruction
DecL	Left-slanting decrease.
K	Knit.
P	Purl.
T	Tuck.
WU	Weave Under.

The printout could look as in the image on the left. The symbol for the expected stitch is always (blank). For patterns that consist of Knit and Purl stitches, the unexpected stitch will be a "." and for other techniques the unexpected stitch is shown by its own specific symbol.

The KnitWrite[®] font that is shipped with DesignaKnit allows other stitches to be defined in Stitch Designer.

As a Symbol may have a different meaning depending on whether it appears on the Right or Wrong side of the garment piece, but the abbreviation always means the same, this information is split into two separate items that can be selected, as clarified in the image below.

Symbol	Abbreviation
(blank)	K on RS, P on WS
.	P on RS, K on WS
ℓ	K1tbl on RS, P1tbl on WS
ℓ̄	P1tbl on RS, K1tbl on WS
Abbreviation	Knitting instruction
K	Knit.
K1tbl	Knit through back of loop
P	Purl.
P1tbl	Purl through back of loop

The "." symbol can mean Purl on the Right Side (RS) and Knit on the Wrong side (WS) as shown in the top half of the image. The abbreviation "P" however always means Purl.

The symbol ℓ can mean Knit through back of loop on a Right sided row and Purl through back of loop on a Wrong sided row. The abbreviations K1tbl and P1tbl always mean Knit through back of loop and Purl through back of loop in the instructions.

Yarn Calculation

Yarn calculations will be done for ribs and cuffs for Standard Garment Styling garment pieces which have not been converted to Original Pattern Drafting. Ribs and cuffs are not included for pieces that have been purely

designed in Original Pattern Drafting or that have been converted from Standard Garment Styling to Original Pattern Drafting.

Select piece			
	SGS	OPD	ESL
FRONT - LEFT	•		borders
FRONT - RIGHT	•		borders
BACK	•		budgies
SLEEVE - RIGHT	•		
SLEEVE - LEFT	•		

Whether a piece has been created in or converted to Original Pattern Drafting can be seen by accessing *Piece / Select Piece*, *Shapes / View Piece(s)* or *Shape File / Select Piece* in Original Pattern Drafting, Stitch Designer or Interactive Knitting respectively.

Rib information will be included for all pieces that show dots in the SGS column only as those pieces are purely Standard Garment Styling. A shape file can include pieces that are Standard Garment Styling and pieces that have

been converted to Original Pattern Drafting.

Adding stitch patterns to shape (garment) pieces does not affect their status. The status is changed however, adding a dot in the OPD and / or ESL columns, if:

- the piece is renamed through *Piece / Rename*, even if it is later renamed to the original name
- a piece outline is changed by moving stitches, thereby converting it to an Exact Stitch Layout piece
- it is altered by any of the tools in Original Pattern Drafting, including moving points



The original Standard Garment Styling status can only be returned to by clicking the Standard Garment Styling program button shown on the left, after which a warning, similar to the one

shown on the right, will appear to indicate that indeed ALL Original Pattern Drafting changes that have been made to the piece(s) in question will be lost, be it changing the name, adding or deleting pieces, moving points or any other change. The garment will then be shown in the Standard Garment Styling screen after which it needs to be saved if it is to be converted to Standard Garment Styling. Ribs and cuffs that have been configured for any of the pieces will then be included in the Yarn Calculation printouts. Shape files that were created in Original Pattern Drafting cannot be converted to Standard Garment Styling as they do not include the necessary properties to do so.



BACK

WARNING: Original pattern drafting has been done for the above pieces. If you proceed, these changes will be lost.

Yarn Calculation Setup

Yarn calculations will be based on the yarn used in this knitted sample

Stitches  Rows

Yarn used  Yarn units

☒ Calculate yarn required for ALL pieces

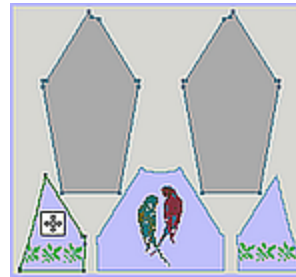
OK Cancel Help

The calculation of the number of stitches and amounts of each yarn needed is based on tensions, chosen garment pieces and different colors used. As yarn weights can vary, the values upon which to base the calculation need to be entered manually in the "Yarn Calculation Setup" dialog, and should be based on a sample of actual knitting. As there is only one value and weight unit to be filled in, it is important that the tension swatch contains all the different yarns that are to be used in the final design in representative proportions. Yarn calculation works best if the yarns used do not vary too much in weight.

The tension swatch needs to be weighed exactly and if, for example, a swatch of 40 stitches and 60 rows weighs 10 grams, these exact figures must be entered into the "Yarn Calculation Setup" dialog. The desired "Yarn units" can be entered as grams, ounces or whatever is required (see red oval) and will be shown as such in the Calculation printout.

The necessary information is assembled from different parts of DesignaKnit. If a stitch pattern has been used for any or all of the pieces in the design, the program will take this into account and calculate how much is needed of each yarn. A summary for all pieces in the entire shape file will be produced if the "Calculate yarn required for ALL pieces" box is ticked. If this box is unticked, a yarn calculation will be printed for each of the pattern pieces that is ticked ([See page 138](#)).

Your Company Name		
marion short cardigan budgies (all pieces)		
Yarn calculation 19/02/2019		
The figures in the rightmost column are approximations based on the measured sample and the main tensions (32.00 x 40.00)		
Yarn name	Stitches	grams
Leaf green	1494	6.23
Sky blue	11109	46.29
Sky	13959	58.16
Petrol	981	4.09
Mud	360	1.50
Light pink	186	0.78
Black	35	0.15
Sea Blue	222	0.93
Mauve	929	3.87
Dark green	147	0.61
Violet	17	0.07
Shape Only	40875	170.31
Totals	70314	292.98
Estimates for rib are based on the sample and the rib tensions (35.20 x 22.22)		
FRONT - LEFT rib	300	1.63
FRONT - RIGHT rib	300	1.63
BACK rib	592	3.22
SLEEVE - RIGHT rib	264	1.44
SLEEVE - LEFT rib	264	1.44
Entire neckband	716	3.89
Totals	2436	13.25
Total grams		306.22



The leftmost image is a printout for all pieces (see dark blue arrow) of the shape file shown immediately to the left. The shape file consists of Standard Garment

Styling pieces only, some of which are integrated with a stitch pattern.

Tensions are printed for the main garment and the ribbing (see blue ovals), as they can be set to different values (See page 197) and are included for all knitting machines **except** the Passap E6000 and E8000.

The weight unit has been specified as 'grams' (see red oval) in the Yarn Calculation Setup dialog.

'Shape Only' in the printout (see light blue arrow) refers to the yarn used for the garment pieces for which a stitch pattern has not been integrated, which are the sleeves in this example. Shape Only could be the main color of the garment as it is not specified further

(probably 'Sky' in this example), or it could be an entirely different yarn.

The Yarn names have been collected from Stitch Designer where color names and symbols can be defined. If a yarn has not been given a name, it will appear as "???". It is important for the color names to match if different stitch patterns are used for one garment, otherwise a situation as shown here will arise, where the same yarn has been named "Sky blue" in one and "Sky" in the other stitch pattern (see red arrows above). Even if a letter is a capital in one and lower case in the other stitch pattern, it is seen as a different yarn.

The 'Entire neckband' (see blue rectangle) is calculated and included only when the "Calculate yarn required for ALL pieces" is ticked. As it is adjacent to other pieces rather than a piece in its own right (as it would be in Original Pattern Drafting) it can only be included when the entire garment is used for calculation. If a shape file includes some Original Pattern Drafting pieces, the neckband will still be calculated and shown, provided that all the pieces that join the neckband are purely Standard Garment Styling (See page 206), for example a sweater consisting of two sleeves, a back and a front piece, regardless of any other pieces, such as a pocket, that may be in the file.

### marion short cardigan budgies / BACK (budgies small)

The figures in the rightmost column are approximations based on the measured sample and the main tensions (32.00 x 40.00)

Yarn name	Stitches	grams
Sky	13959	58.16
Petrol	981	4.09
Mud	360	1.50
Light pink	186	0.78
Black	35	0.15
Sea Blue	222	0.93
Mauve	929	3.87
Dark green	147	0.61
Violet	17	0.07
Totals	16836	70.15

Estimates for rib are based on the sample and the rib tensions (35.20 x 22.22)

BACK rib	592	3.22
Total grams		73.37

### marion short cardigan budgies / SLEEVE - RIGHT

The figures in the rightmost column are approximations based on the measured sample and the main tensions (32.00 x 40.00)

Yarn name	Stitches	grams
Shape Only	20486	85.36
Totals	20486	85.36

Estimates for rib are based on the sample and the rib tensions (35.20 x 22.22)

SLEEVE - RIGHT rib	264	1.44
Total grams		86.79

All yarns for all pieces are summarized in the example above because "Calculate yarn required for ALL pieces" was ticked. If this box is left unticked, a printout will be generated for every piece that is ticked in the "Print Pattern Pieces" dialog and each piece name will be shown at the top of the printout, with a stitch pattern name if one has been integrated, as shown on the left. The top is the 'BACK' piece and the bottom is 'SLEEVE - RIGHT'. The top contains a stitch pattern and the bottom is Shape-only (see red arrows).

The 'BACK' piece with stitch pattern shows all the colors that are used in that particular piece as can be seen when comparing the image to the one above. Leaf green is a color that is used in the front pieces (see small image above) and does not appear in the "budgies small" stitch pattern, while none of the "budgies small" colors except 'Sky', which has been named 'Sky' in one and 'Sky blue' in the other pattern, is used in the front pieces. The 'SLEEVE - RIGHT' piece shows only one unnamed (Shape Only) yarn as it is not integrated with a stitch pattern.

Ribs and cuffs usually belong with one garment piece and as such they are printed in the "Estimates for rib" section (see blue

arrows) for that piece. The Neckband is attached to more than one garment piece and is therefore only present in the printout if the "Calculate yarn required for ALL pieces" is ticked as shown in the example above.

## Garment picture & Stitch pat picture

The Garment picture option is available if all selected pieces have an integrated stitch pattern, otherwise it is grayed out. The same setup screen is shown when *Print / Stitch pat picture* is accessed from Stitch Designer, with the exception that "Setup for Stitch pat picture" is displayed in the title bar instead of "Setup for Garment picture" (see red arrow).

This Setup dialog is identical to the Options screen for "Shaping as X's" ([See on page 147](#)) with the exception of the appearance of "Stitch Representation" (see blue rectangle) and "Stitch Colour" (see red rectangle). Where possible, links have been provided to avoid duplicating information. The options can be set to different values for different print formats and are remembered.

The resulting previews and prints are also dependent on the chosen Method of Knitting.

Setup for Garment picture

Scaling  
☒ Fit to a page  
☐ % of actual size  %

Stitch Representation  
☒ Plain  
☐ Stitch texture (black)  
☐ Stitch texture (white)

Stitch Colour  
☒ Colour  
☐ White  
☐ Grey

Stitch Aspect Ratio  
☒ True ☐ Square

Main Grid - Thickness  
☒ 0 ☐ 1 ☐ 2 ☐ 3

Grid Divisions  
☐ Off ☒ On

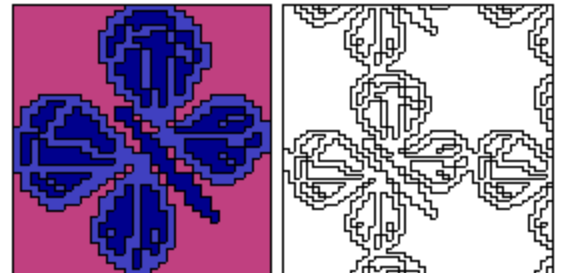
Colour Demarcation - Thickness  
☒ 0 ☐ 1 ☐ 2 ☐ 3

Stitch Numbering  
☐ Off ☐ 12345 ☐ 21123 ☐ 321234  
☒ 54321 ☐ 32112 ☐ 432123

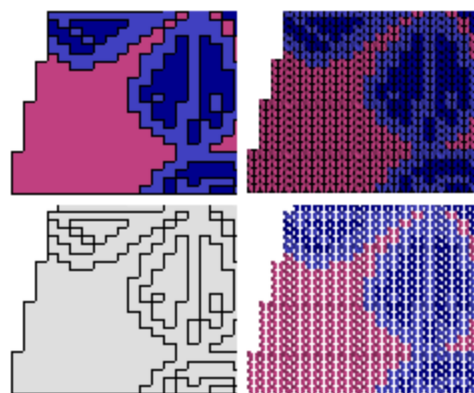
Miscellaneous  
☒ Row numbering  
☐ Inverted left to right (for machine knit only)  
☐ Omit duplicate rows

OK Cancel Help

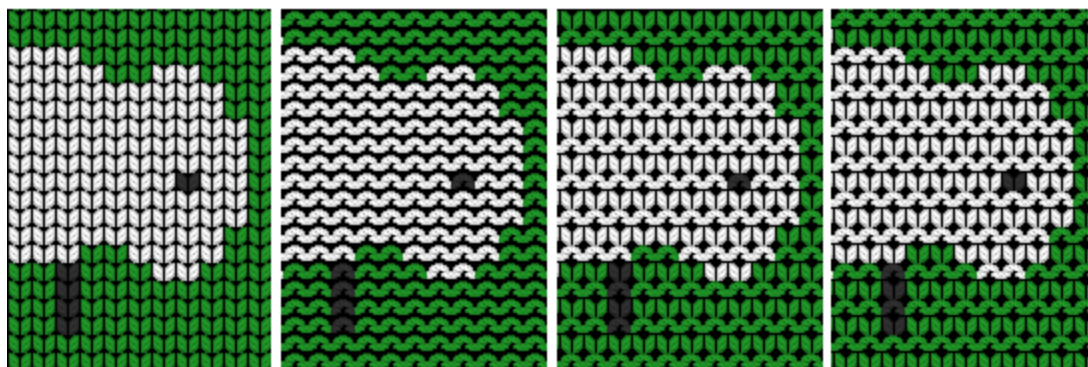
- **Scaling** - "Fit to a page" or "% of actual size" can be experimented with for the most optimal display on the print page ([See page 147](#)).
- **Stitch Aspect Ratio** - selecting "True" returns a shape based on the tensions set while selecting "Square" supposes each stitch to be a square ([See page 147](#)).
- **Main Grid Thickness** and **Grid Divisions** - are set to the size that is specified in Stitch Designer ([See page 148](#)).
- **Colour Demarcation Thickness** ([See page 148](#)) - only makes a difference to pieces with a stitch pattern and can be very useful in combination with choosing "Stitch Colour" White or Grey.
- **Stitch Colour** - stitches can be represented as color, white or gray. If a stitch pattern has been applied to the piece this will be shown in the preview if color is chosen, as shown in the examples on the right. A Colour Demarcation of "1" was chosen for both examples, in which "Colour" was chosen for the leftmost and "White" for the rightmost image.



- **Stitch Representation** - the representation of the actual stitches can be 'Plain' which will display the pattern in a simple grid view, while selecting either of the 'Stitch texture' options will superimpose fabric texture. 'Plain' and 'Stitch texture (black)' can be combined with all three Stitch Colour options. 'Stitch texture (white)' can only be combined with 'Colour' or 'Grey' and if there is white yarn in the stitch pattern, this will then be displayed as light gray stitches. "Stitch Colour" was set to 'Colour' for three of the examples on the right. 'Plain', 'Stitch texture (black)' and 'Stitch texture (white)' are shown clockwise from the top. The bottom left picture was achieved by setting the Stitch Colour to gray and the texture to 'Plain'.



The examples below show the results for Stocking stitch, Reverse Stocking stitch, Garter stitch (K) and Garter stitch (P) respectively while "Stitch representation" is selected as 'Stitch texture (black)'.



- **Stitch Numbering** - can be set to different conventions ([See page 148](#)).
- **Miscellaneous** - "Row numbering" can be switched on or off as wanted and the piece can be printed inverted ([See page 148](#)). The "Inverted left to right" option is turned off and disabled for Garment Picture hand knit patterns because the inverted chart will not match the knitting instructions in the Pattern Text or Garment Text printout.

## Garment symbols & Stitch pat symbols

The Garment symbols option is only available if all selected pieces have an integrated stitch pattern. The same setup screen is shown when *Print / Stitch pat symbols* is accessed from Stitch Designer, with the exception that "Setup for Stitch pat symbols" is displayed in the title bar (see red arrow below).

This screen is identical to the Garment picture & Stitch pat picture ([See page 162](#)) Setup screen with the exception of the appearance of Stitch Representation, which offers the choice between "Stitch symbols" and "Yarn color symbols" (see red oval).

**Setup for Garment symbols**

**Scaling**

☐ Fit to a page

☒ % of actual size  %

**Stitch Representation**

☒ Stitch symbols

☐ Yarn colour symbols

**Stitch Colour**

☒ Colour

☐ White

☐ Grey

**Stitch Aspect Ratio**

☐ True

☒ Square

**Main Grid - Thickness**

☐ 0 ☒ 1 ☐ 2 ☐ 3

**Grid Divisions**

☒ Off ☐ On

**Colour Demarcation - Thickness**

☒ 0 ☐ 1 ☐ 2 ☐ 3

**Stitch Numbering**

☒ Off

☐ 12345 ☐ 21123 ☐ 321234

☐ 54321 ☐ 32112 ☐ 432123

**Miscellaneous**

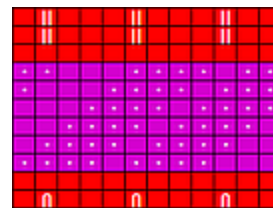
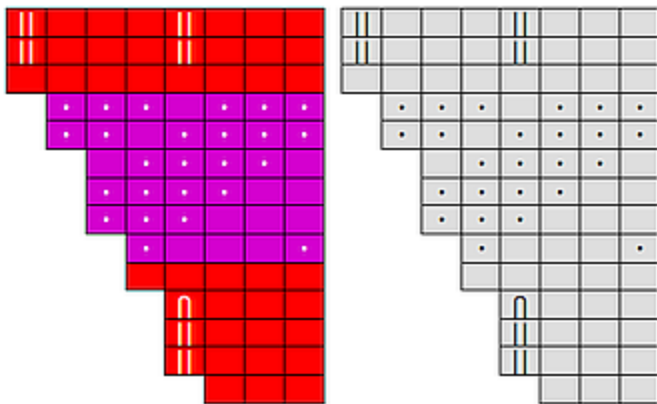
☐ Row numbering

☐ Inverted left to right (for machine knit only)

☐ Omit duplicate rows

OK Cancel Help

Explanations of all other options in this dialog can be found in Shaping as X's ([See page 147](#)) and / or Garment picture & Stitch pat picture ([See page 162](#)), so only the two options that are different have been explained below.



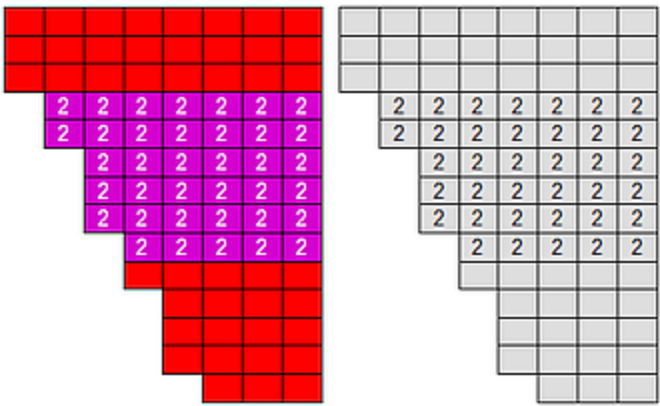
The two leftmost images are based on the stitch pattern shown here, of which one repeat has been shown.

The KnitWrite[®] symbols are displayed when selecting **'Stitch symbols'**. Knit, Purl

and Tuck are used in this example, which is a small part of the entire garment piece printout. The Garment Symbols print shows repeats and different positioning of the stitch pattern, based on its integration with a garment piece. Both images show 'Stitch symbols', while 'Colour'

was selected for the leftmost and 'Grey' for the rightmost in the "Stitch Colour" section.

The larger the percentage of the printout (see blue arrow above), the clearer the symbols will be on the screen, at the expense of seeing the pattern in its entirety. If the option is chosen to fit to a page, the entire garment piece will be shown and the symbols may be very small. More information about designing stitch patterns can be found in the Stitch Designer manual.



Selecting 'Yarn color symbols' in the "Stitch Representation" dialog, in combination with the 'Colour' option in Stitch color results in the colors of the stitch pattern being displayed as shown in the leftmost image. The Yarn symbols, as they have been defined in Stitch Designer are superimposed on the colors.

Selecting 'Grey' in the options results in the second image where only the Yarn symbols are shown against a gray background. Purple was assigned a Yarn symbol in this example and red was not. If no Yarn symbols had been assigned at all, this printout would only show gray stitches.

Integrated template

Fair Isle .....	169
Intarsia .....	171
Jacquard .....	172
Right & Wrong side facing texture .....	173
Lace templates .....	175

**Punch card** and reader sheet templates can be produced to be used with punch card and other knitting machines (such as Brother KH950i, Silver Reed SK840) that can work with reader sheets (such as Mylar). When a punch card or reader sheet is fed into an appropriate knitting machine, the stitch pattern that is punched out or shaded in is produced. DesignaKnit can make exact size templates for punch cards and reader sheets for Passap E6000 and Brother KH950i knitting machines.

Template printing options are only available if a suitable knitting machine has been selected and certain rules have been observed in the design of the stitch pattern (See page 167). The "Integrated template" option is also grayed out if any of the selected (ticked) garment pieces does not have a stitch pattern associated with it or if the method of knitting is hand knit.

**Integrated** stitch patterns are printed in such a way that the center of the garment piece is at the center of the needle bed, while the stitch pattern is shuffled to accommodate this. Stitch patterns that are not associated with a garment piece are **unintegrated** and their templates are printed in such a way that the center of the stitch pattern will be positioned at the center of the needle bed.

Integrated templates ensure that the work will be positioned correctly on the needle bed at the time of knitting. They can be printed by using the *File / Print / Integrated template* menu option in Original Pattern Drafting and Standard Garment Styling or the *Shapes / Print Shapes / Integrated template* in Stitch Designer and have been described in this chapter.

Unintegrated templates can be printed by using the *File / Print / Stitch pat template* option in Stitch Designer and have been described separately in the Stitch Designer manual.

Although Standard Garment Styling does not have a possibility to use stitch patterns directly, they can be applied to the garment pieces by using Stitch Designer, after which "Integrated template" becomes available in the Standard Garment Styling *Print* menu, provided a suitable knitting machine has been chosen.

## Rules for stitch pattern templates

There are certain rules that need to be taken into account when producing stitch pattern templates in DesignaKnit, whether they are integrated or not.

- The width of a stitch pattern has to fit into the width of a punch card an exact number of times. If the punch card has a width of 60, the pattern can have a width of any whole number that 60 is divisible by. For example 5, 10, 12, 15, 20, 60 stitches. As the full width of a punch card must be used, the necessary number of horizontal repeats will be calculated and printed by DesignaKnit.
- Electronic knitting machines that handle Mylar or other reader sheets are more flexible than punch card machines and do not have the requirement for a stitch pattern to fit a whole number of times. Only one horizontal and vertical repeat is printed on the template and all necessary repeating is handled by the memory of the knitting machine. Whether a knitting machine is 'Electronic' can be seen when accessing its Setup, then clicking the "Advanced" button.
- The number of vertical stitch pattern repeats that is needed for a punch card depends on the length the card needs to be in order to loop around the feeding mechanism comfortably. With a pattern that consists of only a few rows, quite a few number of vertical repeats may be needed. The number of punched rows must be at least a little more than half of the total number of rows on a blank punch card. I.e., if a punch card has 60 rows, and the stitch pattern 12, it will be repeated 3 times vertically, resulting in 36 rows - a little over 30. There are no lower limits to the size of the marked area for electronic machines.
- Intarsia templates can only be created when the AG50 Intarsia carriage is used. The template will print multiple rows for each color that is used and the user is advised to consult the knitting machine instructions to interpret the charts.
- Memo symbols cannot be used to produce templates as they do not produce needle selections. The symbols may print if they happen to be on selecting stitches.
- Punch card and reader template printouts are automatically flipped for all methods except Right Side facing texture because the fabric facing the knitter is the wrong side for all other methods.
- If a template is produced for a pattern that is drawn or contains sections that are drawn with the Lace tool it will be marked with a Lace symbol, stitch marking or asterisk on each row that contains Lace symbols, depending on the options chosen in the setup of the stitch pattern template ([See page 167](#)). The symbol appears on the first stitch that contains the symbol. Yarn Symbols, Memo numbers and selecting "Colour" instead of "Black" are all ignored in the template printout for all rows that contain Lace symbols.

The cells that are marked by a stitch symbol, yarn color symbol, stitch marking (1, 2 or 3) or "*" represent selecting needles and these blocks will need to be punched out or shaded in on the punch card or reader sheet.

If a selected stitch pattern cannot be used with the chosen knitting machine because it will not fit within the limits of the punch card or Mylar sheet, DesignaKnit will display a warning such as the one shown on the right. After clicking "OK" the stitch pattern can be adjusted if required and the action repeated.



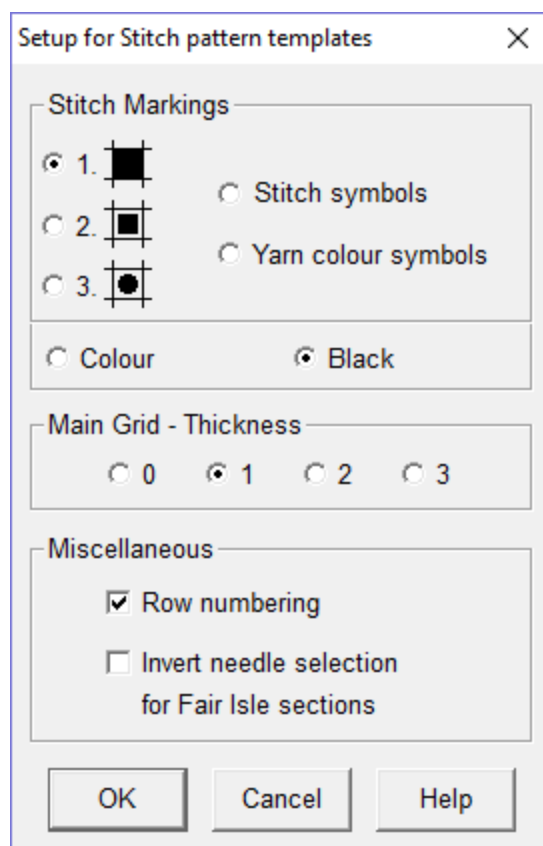
The punch card for the currently selected knitting machine has 18 stitch columns.

grass.stp has 20 stitch columns.

The above stitch pattern does not fit into the punchcard an exact number of times, and therefore cannot be used for the current machine unless you alter it (adjust the no of stitch columns).

## Setup Stitch pattern template

On accessing the print option for stitch pattern templates, the single wrench button can be clicked to select different options in the "Setup for Stitch pattern templates" dialog, as shown below.



A stitch pattern can consist of yarn colors and stitch symbols and, depending on the method of knitting (Fair Isle, Jacquard etc.), different options will be available. The clearest and most commonly used combination is shown on the left. While these options will suffice for most users, pattern publishers may find other combinations useful.

**Stitch markings 1, 2 or 3** can be selected to show selecting and deselecting needles in one of three formats, where option 1 fills the selecting needle grid squares completely, option 2 fills the grid squares just shy of the edges and option 3 fills the grid cells with circles.

**Stitch symbols** will mark the template with any symbols that may have been used in the stitch pattern. The option to display stitch symbols is available only if the stitch pattern is Fair Isle or Right / Wrong side facing texture and contains symbols. The stitch symbols will be displayed against a white background if "Black" has been chosen and against colors of the stitch pattern if "Colour" has been chosen.

As Jacquard is purely a color technique, a template will show needle selections for colors, regardless of any symbols that might be placed on the stitch pattern. If a Fair Isle or Right / Wrong side facing texture stitch pattern contains both color and texture symbols in the same row, the Smart symbol takes precedence and

the selection state of the color in those rows is ignored.

**Yarn color symbols** shows the Yarn symbols, if these have been assigned, on grid cells that are selecting. If "Black" is chosen they will be displayed against a white background in the entire stitch pattern. If "Colour" is chosen, the selecting grid cells will display color in the background. Yarn symbols are set up in Stitch Designer to assign symbols to the different colors used in the stitch pattern. If a color has not been assigned a Yarn symbol, an asterisk is used to mark the template instead. Yarn Colour symbols are not displayed for stitches that are transferred using the Lace Tool. There may be areas of Lace in a Fair Isle pattern and, while the Fair Isle areas will show the Yarn color symbol, the areas of Lace show an "*" for the selecting stitches.

**Colour** and **Black** can be combined with any of the stitch markings. While "Black" marks selecting and deselecting grid cells as black and white respectively, "Colour" will print the colors of the stitch pattern in the background of selecting grid cells, leaving deselecting grid cells white. The latter can make it easier to see where in the template selecting and deselecting takes place. However, on rows with deselecting Smart Symbols (Tuck, slip, weave under) all other stitches, regardless of color, become selecting, which can be confusing. The "Colour" option can be very useful if there are no Smart Symbols in the stitch pattern. It will not produce color in a pattern that is drawn by using the Lace Tool.

Either option will present the deselecting stitches as white. Selecting stitches in the same row are presented as black or colored, depending on whether "Black" or "Colour" is ticked. E.g., if there are Tuck stitches (deselecting) in a row, they will show as white, and all other stitches will be marked black or colored. If there are Thread lace symbols (selecting), these will show up as black or colored while all other symbols in that row will be white.

Selecting a "Main Grid - Thickness" of 1 is recommended for ease of viewing.

**Row numbering** can be switched on or off and will result in the row numbers appearing at the left hand side of the print. There is only one row per pass of the carriage for Fair Isle and Right / Wrong side facing texture methods so each stitch pattern row is represented by 1 template row.

[illegible]

Jacquard, on the other hand, requires multiple passes of the carriage for each row of finished fabric, which makes switching on row numbering particularly useful as it shows how each pair of rows is separated into its component colors, as demonstrated here.

If a Colour Changer has been configured to 'on' and the stitch template or integrated template is printed with row numbers, the printout will show the Colour Changer feeder number or letter ([See on page 270](#)) instead of the Jacquard yarn sequence number. This is demonstrated in the images above, where the first image is of a Jacquard pattern where the Colour Changer is not in use. The Jacquard yarn sequence numbers (J1, J2, J3) are shown. The second and third image are of a Brother and Silver Reed Punch card knitting machine template respectively, where the Colour Changer positions are shown as numbers (Brother) and letters (Silver Reed).

**Invert needle selection for Fair Isle sections** can be selected if the number of grid cells to be selected (punched out or shaded in) is significantly greater than the number that is deselected. The holes in a punch card represent selecting needles. In DesignaKnit the white spaces on a template represent deselecting needles, so anything that is other than white needs to be punched out or shaded in on the actual punch card or reader sheet. If the option to "Invert needle selection for Fair Isle sections" is ticked, the 'Pattern Invert' or 'Negative' switch of the knitting machine also needs to be set. The Invert state needs to be the same in DesignaKnit and the knitting machine.

The colour changer is configured OFF, but the print option to invert needle selection is ON.

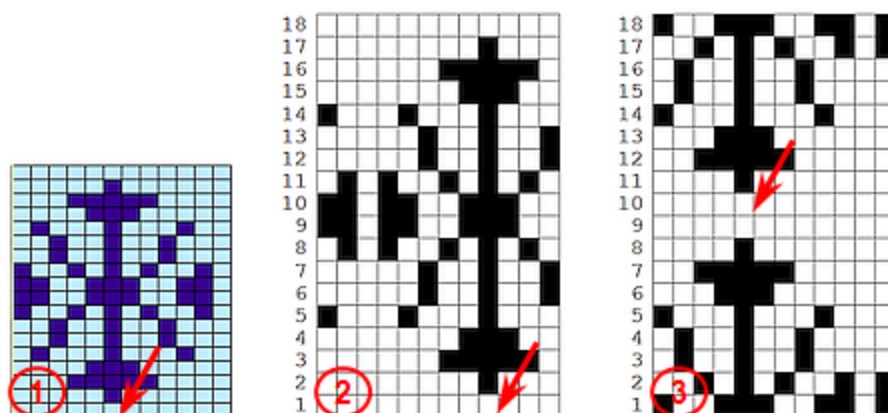
☐ Change the print option to match the CC setting?

Selecting "Invert needle selection for Fair Isle sections" appears to result in a 'negative' image. However, Invert applies only to the Fair Isle rows of the stitch pattern. If a Colour Changer is set in the knitting machine set up in *Options / Method of Knitting* and it conflicts, DesignaKnit will present the option shown on the left.

Some examples have been given below by method of knitting, to demonstrate the various print results.

## Fair Isle

A small Fair Isle pattern was used and integrated with two different garment pieces to demonstrate how the stitch pattern is shuffled, according to its position on the garment piece.



The first image on the left shows the Fair Isle stitch pattern that is used for these examples.

The integrated template print options that were used to produce the templates of images (2) and (3) are: Stitch marking 1, Black, Main Grid thickness 1 and Row numbering.

One of the colors is selecting and the other deselecting, resulting in black (selecting) and white (deselecting) grid cells. The black grid cells need to

be punched out for punch cards, or shaded in for reader sheets.

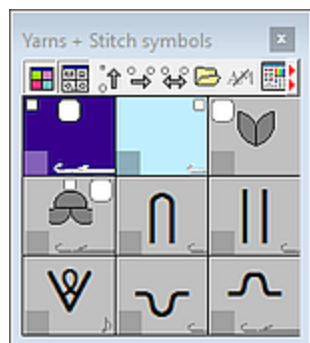
Images (2) and (3) show how an integrated stitch pattern can shift, depending on its position on the garment piece. The red arrows indicate the position of the center of the stitch pattern as it is designed in Stitch Designer. At download, the integrated stitch pattern is shuffled as necessary to be positioned correctly on the needle bed (See on page 234).

snowflake.stp  
 baby cardigan 350 / BACK  
 - snowflake (Knit method=F)  
 Stitch pat template  
 baby cardigan 350 / FRONT - LEFT  
 - snowflake (Knit method=F)  
 Integrated template

The three images above are of the same stitch pattern. Image (1) is the stitch pattern as it is designed on the Stitch Designer workspace, while images (2) and (3) result from printing an integrated template of two different garment pieces.

The text on the left illustrates the different characteristics of the printouts and the images above show how the identical stitch pattern is shuffled horizontally and vertically in order for each garment piece to be positioned correctly at the center of the needle bed.

Template prints for electronic machines that use Mylar or other reader sheets are of one vertical single repeat of a stitch pattern and as many horizontal repeats as are necessary to fill the selected punch card (See on page 167), whether they are printed from the *File / Print / Stitch pat template* or *Shapes / Print Shapes / Integrated template* menu option in Stitch Designer or from *File / Print / Integrated template* in Original Pattern Drafting and Standard Garment Styling.



Although Fair Isle is mainly used as a color technique, it is possible to use Smart and other stitch symbols in order to create texture. The effect of adding stitch symbols to the stitch pattern is demonstrated below.

The palette was set as shown on the left and includes the two colors used for the Fair Isle pattern as well as a few Smart Symbols and one memo symbol.

Dark blue and Weave over are selecting, while light blue, Tuck and Weave under are deselecting, as can be seen by the state of the needle in the bottom right hand side of each symbol. The double decrease symbol has no needle selection and has no influence on the template. It is merely present in this example to show its lack of effect on the template printouts.

The stitch pattern is shown in an unintegrated state so that a number of marked places in it can be followed more easily to clearly show the effects of the different template options.

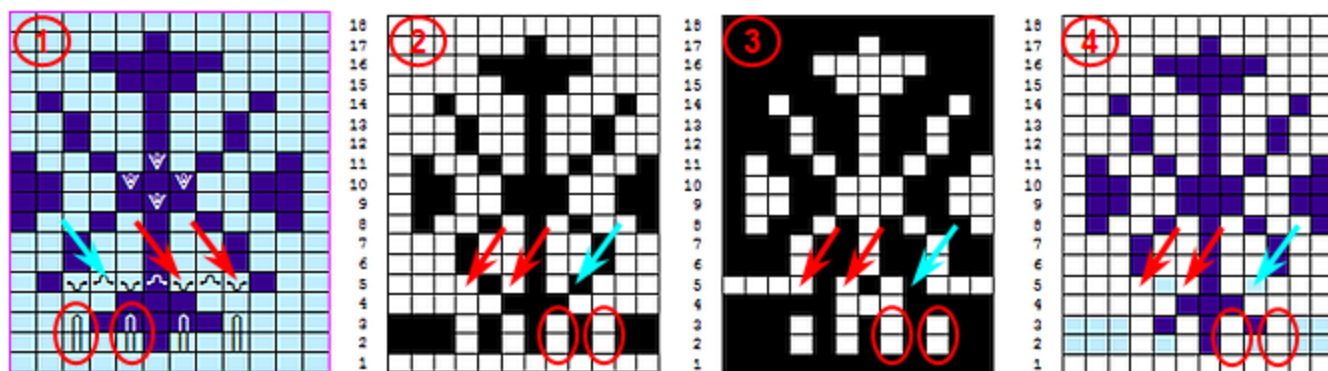


Image (1) depicts the Fair Isle stitch pattern as it is designed on the DesignaKnit workspace. The next three images are different Template prints, based on different settings. The template prints are all flipped because this is necessary for the punch card or reader sheet for Fair Isle patterns. Other than rows 2, 3 and 5 where Smart Symbols are placed, the stitch pattern consists of Fair Isle rows. Two Tuck stitch combinations and two Weave under symbols have been marked in red and followed in all the images. One Weave over has been marked with a light blue arrow in all images.

Image (2) is the result of choosing stitch marking option 1, with "Black" and row numbering ticked. All grid cells that are black need to be punched out or shaded in as the needles will be selecting in those places. As Tuck and Weave Under stitches are deselecting, they are white in all the templates. Weave over is selecting and therefore marked black. The presence of Smart Symbols on rows 2, 3 and 5 means that the selection state of the colors is ignored in favor of the symbols in those rows. So, although the light blue pattern color is on deselecting needles in the Fair Isle section of the pattern, in rows 2, 3 and 5, all stitches other than the deselecting Smart Symbols are shown as selecting.

Image (3) has the same settings as (2), except that the "Invert" option was ticked. This swaps the selection state of the needles, but only on the Fair Isle rows. Rows 2, 3 and 5 that contain Smart Symbols are identical to image (2)!

Image (4) results from the same settings as image (2), except that "Colour" was chosen instead of "Black". There are only two colors per row in Fair Isle of which one is selecting and one deselecting. The "Colour" option shows color on selecting grid cells only, while the deselecting color is presented by white grid cells. As there are deselecting Smart Symbols on rows 2, 3 and 5, all other grid cells have become selecting. Therefore these rows show both colors. All grid cells that are not white need to be punched out or shaded in as the needles need to be selecting in those places.

The most useful template prints for Fair Isle patterns are "Stitch markings" 1, 2 or 3, with or without the Invert option ticked.

## Intarsia

Intarsia templates can only be produced when the Silver Reed with AG50 carriage is selected. For all other knitting machines, the incompatibility message shown on the right will appear.



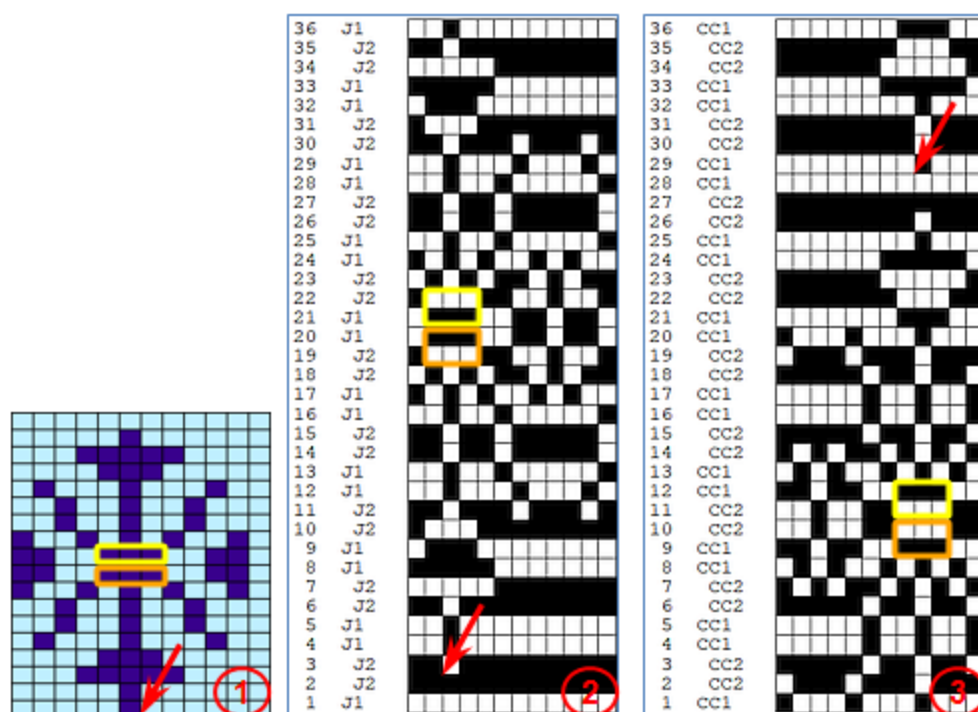
This stitch pattern has a knitting method which is incompatible with the selected format or machine.

Although templates can be printed, as the AG50 can be connected through a cable link, it is unlikely to be of added benefit.

## Jacquard

A two color, 12 stitch wide Jacquard pattern was used in this example with separation method B. The same garment piece was used and positioned differently over the stitch pattern in Stitch Designer to demonstrate how the integrated stitch pattern is shuffled. The center of the garment piece, rather than the center of the stitch pattern, is positioned on the center of the needle bed at the time of knitting.

The stitch pattern has an even number of rows, as required for Jacquard, and the twelve stitches of the snowflake pattern fit twice horizontally into the punch card (24 stitches by 60 rows) of the Brother Standard punch card knitting machine that was chosen here.



The first image on the left shows the two color Jacquard stitch pattern as it is displayed on the Stitch Designer workspace.

The integrated template print options that were used to produce both templates are: Stitch marking 1, Black, Main Grid thickness 1 and Row numbering. As Jacquard needle selection is based on colors the "Stitch symbols" option is grayed out in the "Setup for Stitch pattern templates" dialog (See page 167).

Images (2) and (3) show one vertical stitch pattern repeat. As the stitch pattern consists

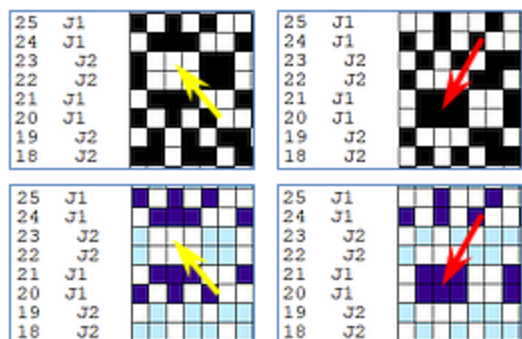
of 18 rows, the template (based on two color Jacquard and separation method B) has 36 grid rows. As the stitch pattern has a width of 12 stitches, it fits twice into the 24 stitch wide punch card, although only 12 stitches are shown in the images above.

A point of reference has been given by the yellow and orange rectangles, which are of the same area of the stitch pattern. It shows how each row of a stitch pattern is made up of two grid rows in the template.

The red arrow in image (1) points to the center of the stitch pattern, which would be at the center of the needle bed in an unintegrated stitch pattern. As images (2) and (3) are templates of stitch patterns that are integrated with two different garment pieces, the center of the stitch pattern ends up elsewhere on the template to ensure the garment piece and not the stitch pattern is centralized on the needle bed. The red arrows in all three images point to the same position in the stitch pattern.

Depending on whether a Colour Changer is in use, either the Jacquard yarn sequence or the Colour Changer feeder position is shown. In image (2), the Jacquard yarn sequence is shown, as can be seen from the preceding

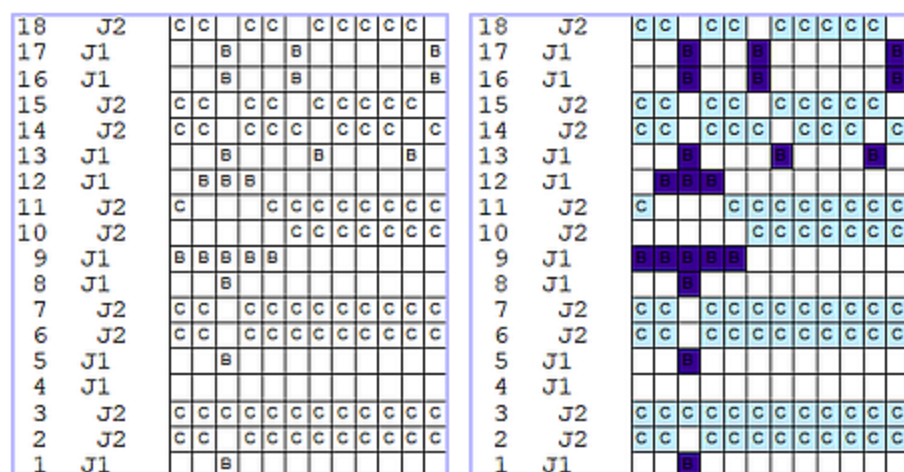
"J" and the Colour Changer was configured to 'on' for image (3), as can be seen by the preceding "CC". The Jacquard separation method can be changed in *Options / Method of Knitting* ([See on page 124](#)). The leftmost numbers refer to the grid rows of the template.



Depending on the position of the stitch pattern relative to the garment piece, different grid cells need to be punched out or shaded in. The images on the left show the template with the 'Black' and 'Colour' options. The stitch pattern was moved down one row in the rightmost images. This results in a reversal of the black (or colored) and white grid cells so that the same area of the stitch pattern is to be left untouched in the first situation (see yellow arrows) and punched out, or shaded in (see red arrows), in the second situation.

The same behavior of reversal of the grid cells to be punched out can be seen on careful inspection in the example above.

Anything other than white on the template needs to be punched out or shaded in for punch cards and reader sheets respectively.



Part of an integrated template is shown on the left while *View / Yarn Symbols* was ticked in *Stitch Designer*.

The options for the Integrated template in *Shapes / Print Shapes* were accessed and "Yarn color symbols" was selected to show the symbols as they are set up in *Palettes / Yarn Symbols*.

"Black" was chosen in the leftmost image, and "Colour" in the rightmost to demonstrate how "Colour" may provide a good way of identifying a

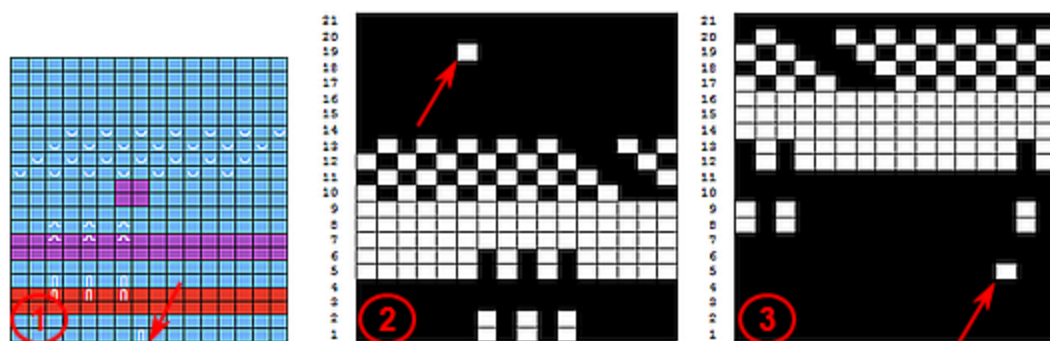
particular location in the stitch pattern.

As always, the black or colored, and in the case of only seeing the Yarn symbols, those that are marked, grid cells need to be punched out or shaded in for punch cards and reader sheets respectively, so they can be fed through the appropriate knitting machine to produce the required stitch pattern. If colors in the pattern have not been allocated any Yarn symbols, they will show up as "*" in order to prevent mistakes in punching out or shading in.

## Right & Wrong side facing texture

As these methods of knitting are texture based, needle selection is based on the presence of Smart Symbols, while colors are ignored.

The Right side facing texture method will print templates as they are on the DesignaKnit workspace while Wrong side facing texture will flip the pattern.



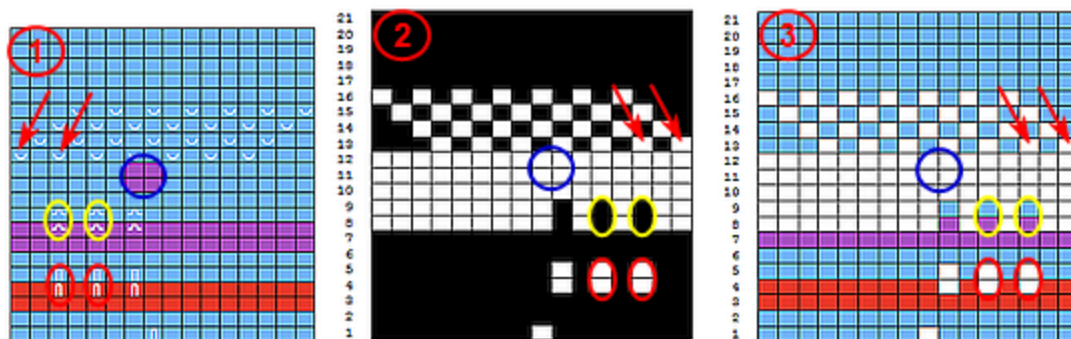
A Wrong side facing texture stitch pattern was used with several Smart Symbols and colors. It was integrated with two different garment pieces to demonstrate how the integrated stitch pattern is shuffled so that the center of the garment piece, and not the stitch

pattern, is positioned at the center of the needle bed.

Image (1) shows the stitch pattern as it is designed on the workspace, while images (2) and (3) are integrated template prints. Only one pattern repeat is shown in these examples although, if a punch card machine is used, more than one repeat may be printed, depending on the size of the stitch pattern and the punch card ([See on page 167](#)).

The center of the stitch pattern is indicated by the red arrows in all images. For demonstration purposes, a deselecting Tuck symbol was placed in the first row of the stitch pattern to easily locate the same position in the integrated template prints.

The most useful template options for Right / Wrong side facing texture methods are Stitch marking 1 and "Black". This combination shows the selecting state of the needles most clearly. Using the "Colour" option shows which yarn colors are used in which positions.



An example of a Wrong side facing texture stitch pattern is shown on the left to demonstrate how Smart Symbols influence selecting and deselecting.

Image (1) is the grid view that is shown on the workspace. Images (2) and (3) are template views, using stitch markings option 1 with "Black" and "Colour" subsequently. As it is a Wrong side facing texture, the template views are flipped horizontally. The Right side facing texture would show the template in the same way as on the workspace.

Colours are completely ignored in the needle selection. Only the Smart Symbols will result in black or colored markings. Both Tuck (red ovals) and Slip (red arrows) symbols deselect and these stitch cells are white, while the Weave over symbol (yellow ovals) selects, resulting in black or colored grid cells. All other stitches in rows where Smart Symbols occur are in the opposite state. On a row containing Tuck or Slip (deselecting) stitches, all other grid cells are black or colored. On a row containing (selecting) Weave over stitches, all other grid cells are white. From the bottom up, rows without Smart Symbols continue in the state that is dominant in the previous row. E.g., row 1 contains one deselecting Tuck symbol and this row is predominantly black (selecting). The selecting state

continues until the next Smart Symbols are encountered in row 4 and 5. Selecting (black) grid cells are still in the majority and this continues until the Weave over (selecting, black) Smart symbol is encountered on rows 8 and 9. The deselecting, white grid cells are now in the majority and the pattern continues upward in a deselecting state until the next Smart symbol, where it switches again.

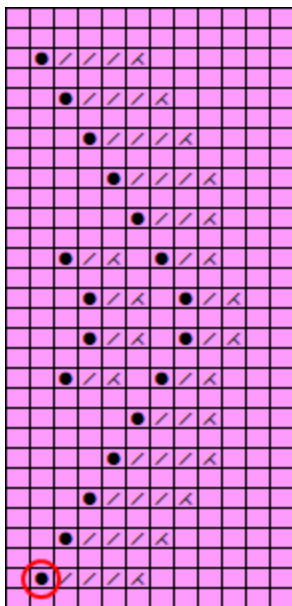
The black or colored (selecting) grid cells need to be punched out or shaded in for punch cards or reader sheets.

If both light blue and purple are opaque, printing the template will generate a warning message for rows 11 and 12 as there can only be one opaque color per row, if purple is transparent it will not. In either case the transparency setting of the colors is ignored as far as needle selection is concerned. At the Interactive Knitting stage, if the transparency is not corrected, the color that is secondary will be ignored in favor of the main color for these two rows, which means that in this case, light blue will be used.

Right / Wrong side facing texture stitch patterns can have only one Opaque color in each row.

## Lace templates

Punch card or Mylar sheet template prints will not resemble the lace pattern on the workspace because template prints map the transfer rows that are required to knit the pattern, which are likely to be in excess of the Stitch Designer pattern rows.



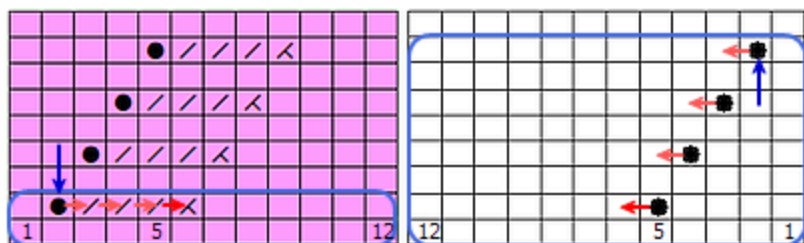
For patterns that contain Lace sections or are wholly designed as lace, any other colors or stitch symbols that may be incorporated in the lace rows are ignored. Only stitch markings 1, 2 or 3 can be used. "Colour" may be chosen in the template setup, but is only shown for sections that do not contain lace symbols.

The example on the left is a lace pattern in one color. The Lace tool was used to produce this 12 stitches by 30 rows pattern, to fit a punch card or reader sheet. The Stitch Designer Check option was used to make sure that the pattern is free of errors.

It is important to realise that the stitches need to be transferred to the correct positions before a row can be knitted, in order for each eyelet to appear at its intended location. As stitches can only move one position at each pass of the carriage, several passes may be required before yarn is actually knitted. Therefore the template shows multiple rows for each row of the stitch pattern. The exception to this is when Silver Reed simple lace is used, in which transfer and knit happen in the same pass of the carriage, so the template will show the same number of rows as the stitch pattern.

Templates for Punch card machines will fill the width of the card and at as many vertical repeats as are necessary to fill the card, while templates for electronic machines with reader facilities will produce a template of one stitch pattern repeat ([See also Rules for stitch pattern templates on page 167](#)).

Whether the pattern is Right or Wrong side facing texture, it will be presented in the same way on the Stitch Designer workspace as this shows the finished pattern. The template prints for punch card or reader sheet will be the same as the stitch pattern on the workspace for Right side and inverted for Wrong side methods.

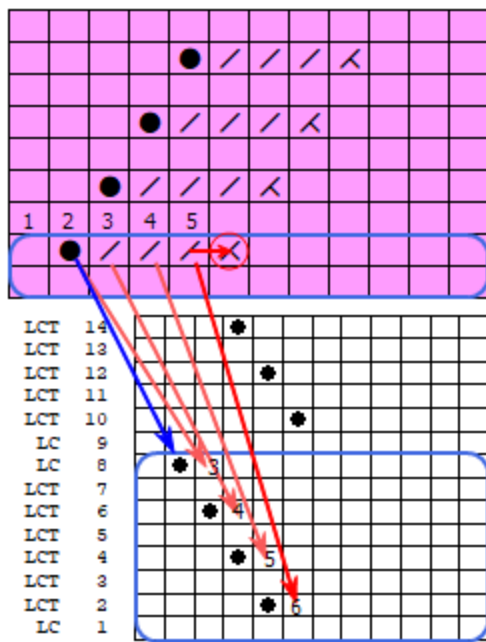


The example on the left shows part of a **Wrong side facing** texture lace pattern as it appears on the Stitch Designer workspace. The template print for a **Silver Reed** knitting machine is shown to its right. The same two rows of the pattern are surrounded by a rounded blue rectangle in stitch pattern and template print.

The template is inverted because the method is Wrong side facing texture, so that stitch 1 is on the left in the stitch pattern and on the right in the template printout. The first row is knitted from left to right in normal knitting mode. The carriage is then set to transfer only and stitch 5 is placed onto stitch 6 in the second pass of the carriage (see red arrows in the images), leaving needle 5 empty. While pushing the carriage to the other side, stitch 4 is transferred to the now empty needle 5. Two more of these movements place two more stitches to their right on empty needles (see pink arrows in the image). For the final pass, the carriage needs to be set to Transfer + knit and stitch 2 will be transferred to needle 3, knitting at the same time and thus creating the eyelet. The necessary carriage passes and switching between Transfer and Transfer + knit mode can easily be seen in the Interactive Knitting "Countdown + Shaping Instructions" window.

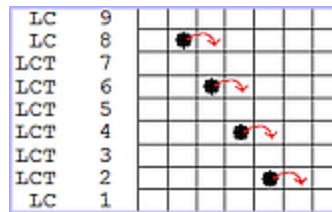
Brother knitting machines use a separate lace carriage to work the transfer rows while the normal carriage knits. Silver Reed uses a lace carriage to transfer and transfer + knit by selecting the appropriate mode on the carriage. Brother and Toyota preselect. All these different scenarios are handled by DesignaKnit so the user just needs to design the lace pattern.

The example below illustrates how the lace template is to be interpreted for a **Silver Reed** electronic knitting machine (SK840) with a **Right side facing** texture pattern. The same area of stitch pattern has been marked in blue rounded rectangles to show the difference in presentation on the Stitch Designer workspace which shows the pattern as it will be after knitting (top), and the template (bottom) which shows the passes of the carriage that are needed to produce the pattern.



The template shows how 8 passes of the carriage are required to produce the first 2 template rows of the pattern. The template rows are as follows:

**Row 1 (LC)** - uses the Transfer + knit (LC) setting of the Lace carriage to knit all the stitches across.



**Row 2 (LCT)** - uses the Transfer only (LCT) setting of the Lace carriage and transfers stitch 5 on top of stitch 6 (see red arrows), leaving needle 5 empty. The image immediately to the left shows what the carriage is doing. The decrease symbol at the start of the transfer sequence (see red circle) is not marked on the template. The long red arrow in the leftmost image points out the position of the first 'decrease' of the Stitch Designer workspace in the template. This is the position where 2 stitches are placed on the same needle, while the black marking to its left is the then empty needle.

**Row 3 (LCT)** - takes the carriage back to its correct side in Transfer only mode.

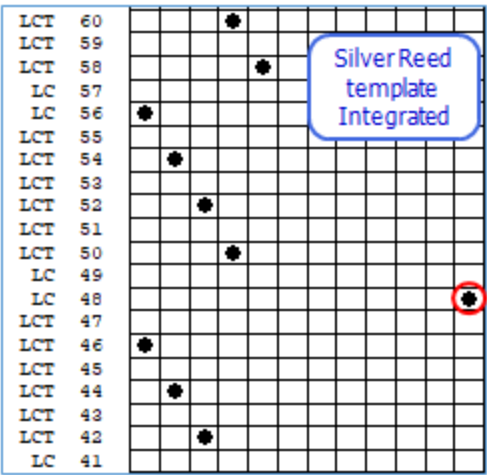
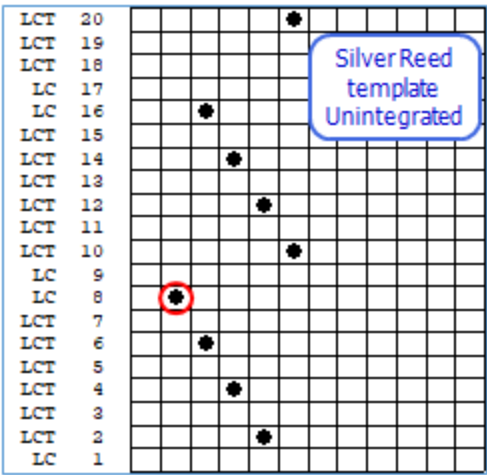
**Rows 4 to 7 (LCT)** - are repeats of the second and third template rows. The pink arrows point out that stitch 4 is transferred to where 5 was, stitch 3 to where 4 was.

**Row 8 (LC)** - the carriage has to be switched to Knit + Transfer mode (LC) and will transfer stitch 2 to where 3 was, creating the eyelet as the row is knitted in the same pass of the carriage. This completes the current lace sequence of finished fabric row 2. The position of the eyelet in the Stitch Designer workspace now matches the position of the marking in the template (see blue arrow).

Brother and Silver Reed examples have been worked out below for (part of) the same pattern without and with integration with a garment piece, because their lace templates show different elements. Integration has the additional effect of the eyelets and transfers being in a different place in relation to the needle bed when the pattern is being knitted. This can make it difficult to pinpoint the exact location of specific eyelets in the template.

Only one horizontal repeat has been shown although the print will produce as many repeats as necessary to fill the punch card if a punch card knitting machine has been selected. Other electronic machines with punch card capabilities ([See page 119](#)), such as Silver Reed 840, 550 or Brother KH910 will only produce templates for one repeat of the stitch pattern.

Although a Wrong side facing method will generally be used, it is easier to see how the stitch pattern is reflected in the template for the Right side facing texture method, which is why this has been chosen in these examples.

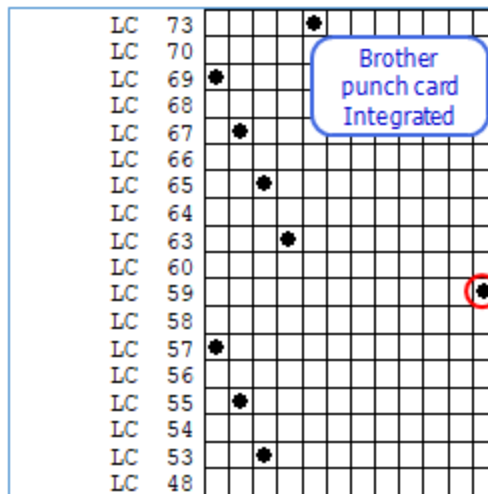
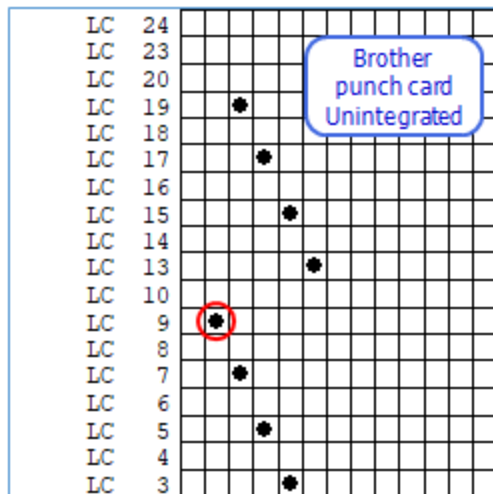


**Silver Reed** knitting machines use a separate Lace carriage which can be set to transfer (LCT) or knit (LC). Both transfer and knit rows are shown for Silver Reed punch card and electronic machines with punch card capabilities, so that the row numbering is always sequential.

Stitch marking "3", "Colour", Grid thickness of 1 and Row numbering were chosen as

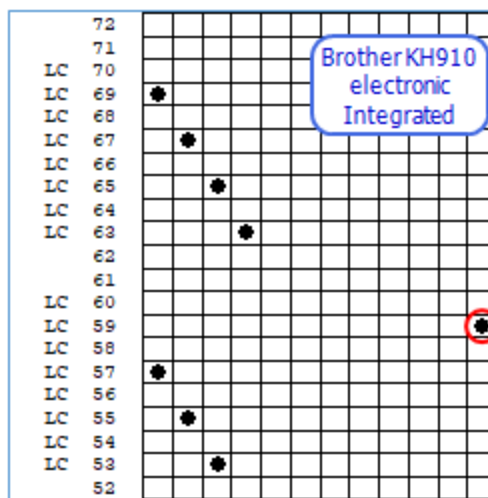
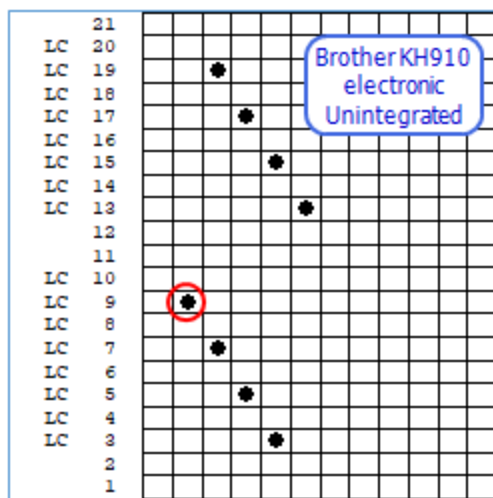
template settings. The leftmost image is of the unintegrated stitch pattern and the rightmost shows that the pattern moves in relation to the needle bed when it is integrated with a garment piece. As well as being in a different place horizontally, the pattern starts in a different vertical place, so that main and transfer passes are now on different rows.

The first eyelet in the unintegrated pattern is indicated by a red circle in both images. This eyelet is in a different horizontal as well as vertical position for the integrated template and the relevant portion of the template, with different row numbers and the marked eyelet, has been shown in the rightmost image.



**Brother** knitting machines use a separate Lace carriage to transfer the stitches while the main carriage knits the yarn after all transfers have taken place.

Only the rows that deal with the transfers are shown for punch card knitting machines, omitting the rows where yarn is actually knitted by the main carriage. The row numbering is not consecutive, as can be seen in the top two images on the left, in which the standard Brother Punch card machine has been selected. The passes marked with LC (which for punch card machines is all of them) show the needles that are being selected by the lace carriage.



When a Brother electronic  
knitting machine is selected

to produce template prints, both transfer (LC) and knit (blank) rows are shown and the row numbering is consecutive, as shown in the lower two images.

The necessary switching between the main and lace carriages is indicated in the Interactive Knitting "Countdown + Shaping Instructions" window. The main carriage is shown as white and the lace carriage as pink (for normal Lace transfers) or blue (for Fine Lace transfers) in its "Piece Overview" window.

Both leftmost images show the first few rows of the stitch pattern as the template is shown for the unintegrated stitch pattern. The rightmost images show the same part of the stitch pattern for an integrated pattern. The position of the first eyelet (see also image of the stitch pattern above) has been marked by a red circle in all examples. As the stitch pattern is positioned differently in relation to the needle bed the first eyelet appears in different place both horizontally and vertically.

More information about knitting lace on the different knitting machines can be found in [Lace on specific machines](#).

## Integrated changes

This option is available when only pieces with a stitch pattern are selected to be viewed or printed. Even if one of the pieces does not have a stitch pattern associated with it this option is grayed out.

It is not always possible to use this option. Some combinations of knitting machine, method of knitting and stitch texture pattern are not suitable for this option and error messages such as the ones shown on the right can appear.

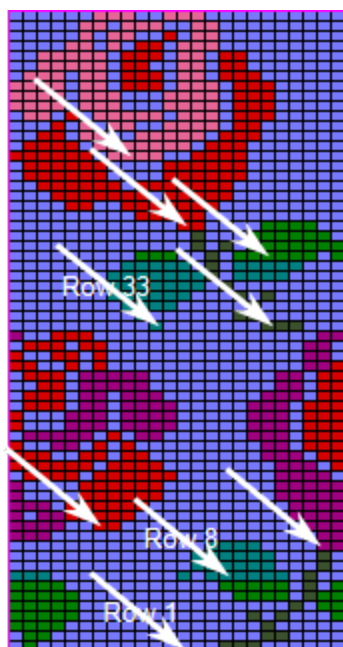
The "Integrated changes" printout indicates at what row numbers a different colored yarn enters the piece. There may be a lot of different colors used in a Fair Isle stitch pattern, but only 2 colors per row. Whenever a different color enters the pattern this classifies as a color change. As long as the same two colors are used, albeit in different stitch combinations, there is no mention of a change.



This stitch pattern has a knitting method which is incompatible with the selected format or machine.



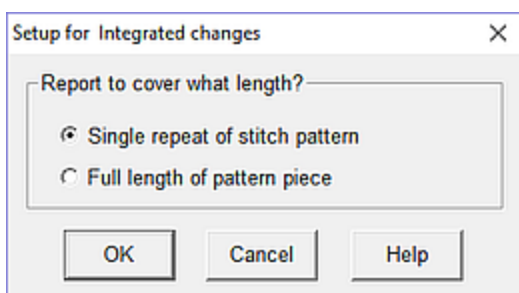
The AG50 can knit only patterns which have the knitting method set to Intarsia.



The rosy.stp stitch pattern (3 color Jacquard) shown on the left has been used in a garment piece and an integrated changes printout has been made.

Each color change mentioned in the print below has been pointed out by a white arrow in the image on the left. Row 1 starts with three colors. In row 8 green is substituted by turquoise, in row 11 bottle is substituted by cerise, in row 33 two colors are substituted etc.

Although the stitch pattern consists of seven colors in total there are only ever a maximum of three in any one row to conform to the conventions of 3-color Jacquard.



Depending on whether "Single repeat of stitch pattern" or "Full length of pattern piece" is selected in the setup box which is accessed by clicking on the single wrench, the printout will consist of only one repeat, or incorporate all of them, numbering each row both for its row number in the piece as for the repeat

row (see red rectangles on image below). In this example row 1 of the stitch pattern is repeated for every instance after the first one as there are two colors that need to be changed at that point. As this is a Jacquard pattern, the numbers of the colors refer to the feeder they are assigned to or the order in which they enter the pattern. If a color has not been assigned a name, it will be represented by "???" in the printout (see red oval).

toddlerdufflejacketgirl / Body - rosy (Knit method=3)  
Integrated changes 26/06/2017

Silver Reed SK840, 550, 560, 580

ROW = 1 /	1	1=Blue	2=???	3=Bottle
ROW = 8 /	8	1=Blue	2=Turquoise	3=Bottle
ROW = 11 /	11	1=Blue	2=Turquoise	3=Cerise
ROW = 13 /	13	1=Blue	2=Red	3=Cerise
ROW = 33 /	33	1=Blue	2=Turquoise	3=Cerise
ROW = 33 /	33	1=Blue	2=Turquoise	3=Bottle
ROW = 40 /	40	1=Blue	2=???	3=Bottle
ROW = 43 /	43	1=Blue	2=???	3=Red
ROW = 49 /	49	1=Blue	2=Pink	3=Red
ROW = 65 /	1	1=Blue	2=???	3=Red
ROW = 65 /	1	1=Blue	2=???	3=Bottle
ROW = 72 /	8	1=Blue	2=Turquoise	3=Bottle
ROW = 75 /	11	1=Blue	2=Turquoise	3=Cerise
ROW = 77 /	13	1=Blue	2=Red	3=Cerise
ROW = 97 /	33	1=Blue	2=Turquoise	3=Cerise
ROW = 97 /	33	1=Blue	2=Turquoise	3=Bottle
ROW = 104 /	40	1=Blue	2=???	3=Bottle

When using Interactive Knitting, alerts can be set for these changes to facilitate the process of changing yarns.

# Using DesignaKnit

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This chapter contains a variety of subjects to help use the DesignaKnit program to its fullest extent and as smoothly as possible.

## Keyboard short cuts

Many buttons and menu options can also be achieved through keyboard short-cuts. The following tables list all the options. The first table contains all the short cuts that are common to all the sections of DesignaKnit, the second (if available) those specific to Interactive Knitting.

If the (laptop) keyboard is configured to use alternative functions (such as brightness, volume etc.) the "Fn" key needs to be used together with the required F-key to provide the desired result. I.e., if "F2" does not work, "Fn-F2" will.

### General keyboard short-cuts

Button	Menu Option	Short-cut	Remarks
	Standard Garment Styling	F5	Displays a warning that changes made in Original Pattern Drafting will be lost if it is switched to from an Original Pattern Drafting piece
	Original Pattern Drafting	F6	
	Stitch Designer	F7	
	Interactive Knitting	F8	Has to be exited before the other options become available again
	DesignaKnit Graphics Studio	F9	Has to be exited, which opens Stitch Designer, before other options become available again
	<i>Edit / Redo...</i>	Ctrl-Y	The menu option specifies the action last taken
	<i>Edit / Undo...</i>	Ctrl-Z	The menu option specifies the action last taken

Button	Menu Option	Short-cut	Remarks
	<i>Edit / Cut</i>	Ctrl-X	In Original Pattern Drafting this refers to points, in Stitch Designer to a selection on the workspace
	<i>Edit / Copy</i>	Ctrl-C	Copies a selected area
	<i>Edit / Paste</i>	Ctrl-V	Pastes a previously Cut or Copied selection in Original Pattern Drafting, Stitch Designer and DesignaKnit Graphics Studio
	<i>File / New</i>	Ctrl-N	In Original Pattern Drafting and Standard Garment Styling this refers to shape files, in Stitch Designer to pattern files
	<i>File / Open</i>	Ctrl-O	Opens Shapes or Stitch Patterns folder in normal Windows view
	<i>File / Print</i>	Ctrl-P	Accesses the available Print options in Original Pattern Drafting, Standard Garment Styling and Stitch Designer
	<i>File / Save</i>	Ctrl-S	Saves file without further prompting unless it has not been named yet. In Original Pattern Drafting "Shift-F12" can also be used
	<i>File / Thumb-nails</i>	Ctrl-T	Opens Shapes or Stitch Patterns folder in thumbnails view. In Original Pattern Drafting "F12" can also be used
		Tab	The Tab key moves the focus from one entry to the next in dialogs. Sometimes it selects and highlights the existing entry, sometimes it just places the cursor in the entry
		Shift-Tab	Holding the Shift key while pressing the Tab key moves backwards through entries in the dialogs

### Keyboard short-cuts specific to Interactive Knitting

Button	Menu Option	Short-cut	Remarks
	<i>Go / Stop</i> <i>Go / Go</i>	F2	Toggles DesignaKnit interaction with the knitting machine
	<i>Go / Ready</i>	F3	Provides Ready instructions to synchronize the knitting machine carriage with DesignaKnit. This can be at the start of knitting or when returning after a break

Button	Menu Option	Short-cut	Remarks
	<i>Go / Next Row</i>	Space bar Up arrow	Increments of 5 rows are made using "Shift", increments of 20 by using "Ctrl" in combination with space bar or Up arrow
	<i>Go / Previous Row</i>	Down arrow	Increments of 5 rows are made using "Shift", increments of 20 by using "Ctrl" in combination with Down arrow
	<i>Window / Copy to Clipboard</i>	"Ctrl-C"	Copies the workspace as it is, including the Left Toolbar buttons so that it can be pasted in other applications

## Workspace Colours

DesignaKnit uses colors as visual indicators, as listed in the table below.

Colour	Where	Explanation
Light blue	Background of thumbnails	Originally created in Original Pattern Drafting, or created in Standard Garment Styling and at least one of the pieces altered in Original Pattern Drafting
Mid blue	Background of thumbnails	Created in Standard Garment Styling, no alterations in Original Pattern Drafting
Light gray	Background of thumbnails	Created in Original Pattern Drafting
Red / Pink	Cross hair cursor	Position of cursor matches the line exactly
Dark purple	Exact Stitch Layout	Knit direction error: a picking up of previously held stitches happening at the start of a row
Pink line	Exact Stitch Layout	Knit direction error: a cast off happening at the end of a row
Light purple	Exact Stitch Layout	Knit direction error: a hold happening at the start of a row
Red line	Exact Stitch Layout	Knit direction error: a cast on happening at the end of a row
Light green	Handles	Active handles
Orange	Handles	Marker (only shows up when Marker button is selected)
Light gray	Pieces	Created in Standard Garment Styling, no alterations in Original Pattern Drafting
Light blue	Pieces	Created in Original Pattern Drafting
Light gray / blue	Pieces	Created in Standard Garment Styling and altered in Original Pattern Drafting
Light green	Pieces	Altered with Exact Stitch Layout
White	Pieces on workspace	Indicates the active piece

## File types

DesignaKnit has various file types that are used throughout and are applicable to different parts of the program.

- .shp - is used in Original Pattern Drafting and Standard Garment Styling to identify the shape files that can contain different pieces to make up one piece of work, like a garment with front, back, sleeves etc.
- .stp & .pat - are used in Stitch Designer to identify stitch patterns that can be combined with shape files. Newer versions of DesignaKnit use the .stp and older versions the .pat format.
- .dat - is a file type that is used with the Silver Reed PC10. *.dat files are saved onto a specially formatted SD card in order to transfer stitch patterns from computer to knitting machine. *.dat is shown alongside *.stp and *.pat file types.
- .plt - is used in Stitch Designer to identify palette files that contain colors and stitch symbols to be used in stitch pattern files. Default palette files are provided and many user palette files may be created additionally.
- .csv - is used in Stitch Designer to identify symbols files that have been created or used in the Symbols Organizer. Some can be user created and used, others are provided by DesignaKnit.
- Graphic files - can be imported and used in Stitch Designer and DesignaKnit Graphics Studio to expand the possibilities of designing stitch patterns. DesignaKnit can recognize a whole host of graphic image files (*.bmp, *.ico, *.jpg, *.jpeg, *.gif, *.pcx, *.png, *.tga, *.tif, *.p?m and *.wmf) that can be incorporated.

## Folders and Paths

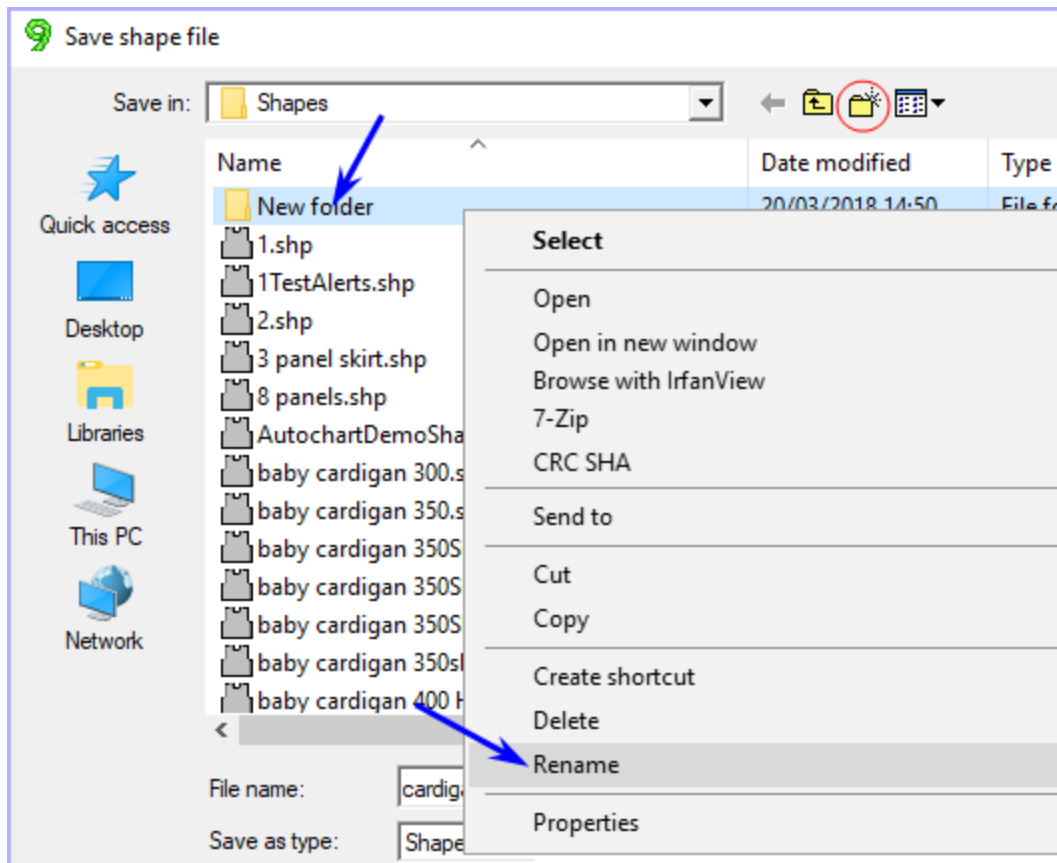
When the program is installed the DesignaKnit files are located in certain locations, separated in program files and user files. Each user account has its own "documents" folder into which the DesignaKnit 9 shapes and stitch pattern files are placed. The program provides some shape files and a lot of stitch pattern files. In addition to creating new files, the provided files can be copied, amended and saved into these or different locations.

```
C: \Program Files\DesignaKnit 9
C: \Users\<Username>\Documents
  \DesignaKnit 9
    \Shapes
    \Stitch patterns
      \Brother
        \pb5
        \Stitch_World
      \Silver Reed
```

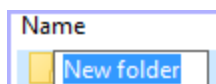
The DesignaKnit Program files are located in the appropriate Programs folder, which, depending on the Windows version, may have a different name to "Program Files" which is shown in the example to the left. This folder should not be altered in any way, as the files in it are interlinked, connected and necessary for the correct operation of the program.

Each user account on a Microsoft Windows system has its own folder for DesignaKnit 9 documents. The program creates the "Shapes" and "Stitch patterns" default folders at installation time and includes a variety of example files.

The provided Brother and Silver Reed stitch pattern folders are read-only to ensure that these knitting machine specific stitch patterns cannot be inadvertently changed. Attempts to save any stitch patterns in these folders will result in the "Please use a different folder to save your work in" message.



New folders can be created at the time of saving a file. Alternatively, folders can be created in Windows by opening File Explorer, navigating to the correct location, right clicking and selecting "New Folder" from the menu that appears.



Clicking the "Create New Folder" button (see red circle) results in a screen similar to the dialog shown here. As long as the words "New Folder" are highlighted in blue, as shown in the smaller image, a new name can be typed in and will replace the text.

If the "Enter" key is pressed or the mouse (inadvertently) clicked outside the box, the name of the folder will be "New Folder" (see top blue arrow). Right clicking on this folder name will present a selection menu with a number of options, depending on the Windows version and the programs that are installed. "Rename Folder" can be selected (see bottom blue arrow). Alternatively, the "F2" key can be used to Rename, or the folder name can be clicked on twice in succession (not double clicking) to highlight the name, which allows renaming. The same procedure can be used to change file names.

The folder name can be very descriptive but cannot include any of the following characters: \ / : * ? " < > | as these have specific uses in Windows.

## TIP!

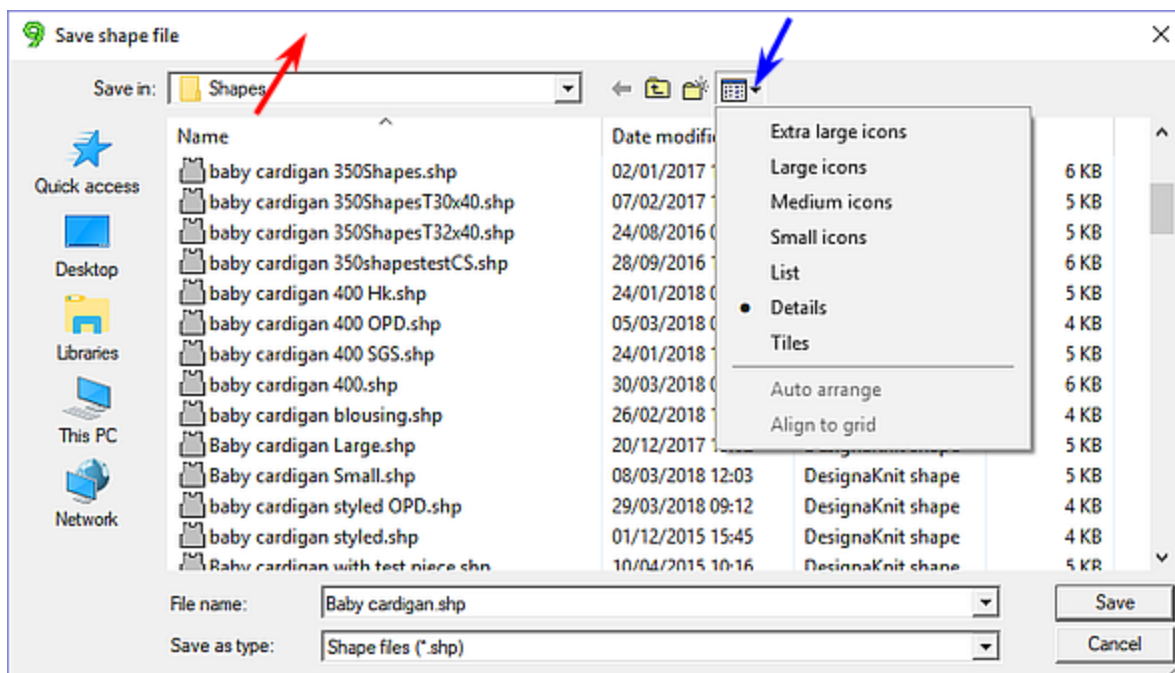
To organise the user files efficiently, a "Tutorials" folder could be created directly underneath the "Users \<username> \documents \DesignaKnit 9" folder into which downloaded tutorials can be placed. Shape files could be saved in different folders based on categories like Adult, child etc. Stitch patterns could be organized in different folders according to color schemes, method of knitting, motifs, trials, finished patterns

etc. An "Images" folder could be created to contain images for DesignaKnit Graphics Studio, images to be used as background pictures etc.

Whenever a file needs to be saved, whether by user action or because DesignaKnit presents a dialog to save, the default location as set in the specific section is presented. This location may be changed in each section by accessing the *File / Default Folder* menu option. Depending on the situation, the title of the dialog that is opened on clicking "default folder" may vary:

- Default folder for *Shapes* in Standard Garment Styling and Original Pattern Drafting
- Default folder for *Background Images* in Original Pattern Drafting
- Default folder for *Stitch Patterns* in Stitch Designer
- Default folder for *Graphic image files* in DesignaKnit Graphics Studio

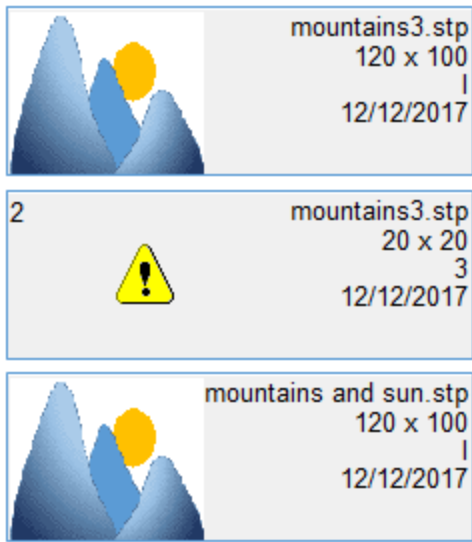
The default folder locations are used when accessing files to open or delete them, or saving new files.



Files and folders may be viewed in a variety of ways by clicking the "View Menu" button (see blue arrow). Selecting icons or tiles in the *File / Save as* or *File / Open* views will display a generic icon only. If more detail is needed when opening files the *File / Thumbnails* option can be used instead for shape (garment) files ([See page 237](#)), stitch patterns ([See page 209](#)) or image (graphic) files ([See page 245](#)). If dialogs are in the way they can be moved by clicking and holding the title bar (see red arrow), then dragging them to a different position on the screen.

It is good practice to keep all DesignaKnit user files together for easy location and backup.

## Rename files



DesignaKnit shape, stitch pattern and graphic image file names can all easily be renamed in Windows explorer by right clicking on them and choosing the "Rename" option, by pressing the "F2" key while the name is highlighted or by clicking once on the file name while it is highlighted, then typing a new name.

These changes will immediately be taken into account in DesignaKnit and the new file name will be available whenever the *File / Open* menu option is used.

However, if files are renamed during the time that DesignaKnit is in thumbnails view, the change is not immediately reflected because of the way the thumbnails would have to redraw. If a file that no longer exists because it has been renamed is clicked on once to make it show in the preview section it will not appear. When scrolling past the file and returning so that it shows in the visible section, the now unused file name will appear with a yellow warning triangle, as shown on the left and the new file name is not available yet. The renamed file will not be

visible until the thumbnails view is refreshed by a different action, such as switching to a different folder, then back again or changing the search criteria in the file name field.

## Accessing Help

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<b>Manual</b> .....	<b>192</b>

There are several ways to access Help within DesignaKnit 9. As well as the options listed below, a national distributor (see [Soft Byte Ltd](https://www.softbyte.co.uk/contact.htm), <https://www.softbyte.co.uk/contact.htm>) can be enlisted for help, or even a local hand or machine knitting club.

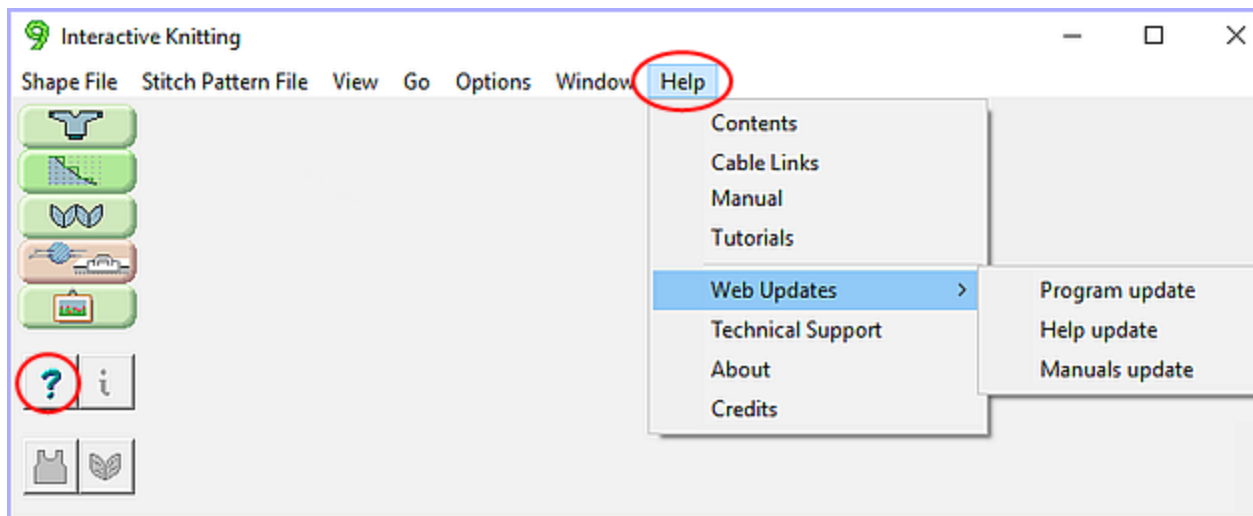
Throughout the manual:

- Menu options have been shown in an italic format, as follows: *File / Open*
- Text that is shown literally, such as in dialogs or buttons has been enclosed in quotation marks, as follows: "OK"
- Links that point to websites are slightly darker than links that are internal to the manual

With the introduction of each new Windows version, the appearance of dialogs has changed. All effort has been made to be as consistent as possible, but screenshot images can be slightly different across the different Windows versions. This has no bearing on the contents.



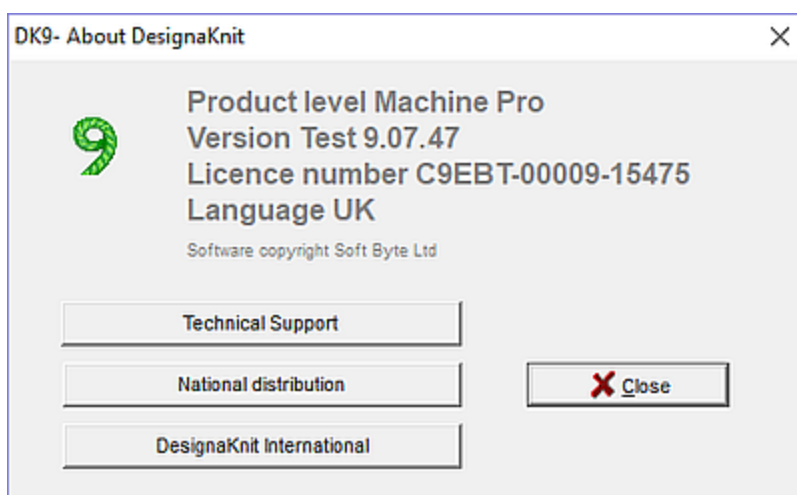
Most dialogs contain a Help button which will open the relevant Help chapter at a specific place when clicked on. More general Help can also be accessed from the main DesignaKnit screen (see red ovals). The image below depicts the *Help* menu. Although the image is taken from Interactive Knitting, the options are the same or very similar for all DesignaKnit program sections. As "Cable Links" is only applicable to machine knitting it will not appear in the HandKnit product level, in the Stitch Designer and Interactive Knitting sections.



-  on the Left Toolbar navigates to the "Buttons and Menu" chapter which lists all the buttons and menu options of the relevant program section, providing descriptions and further page references where necessary.
- **Help / Contents** on the top menu bar accesses Windows help from where navigation through chapters or search on individual words is possible. More information can be found in Contents ([See page 190](#)).
- **Help / Cable Links** is only present in Stitch Designer and Interactive Knitting for Complete, Machine Pro and Machine Standard product levels. Clicking this button opens a chapter where information about Cable Links can be found, in which links to the Soft Byte Ltd website are provided.
- **Help / Manual** opens the manual of the DesignaKnit section it is opened from in PDF format, which can be printed, viewed or searched through as needed. More information can be found in Manual ([See page 192](#)).
- **Help / Tutorials** accesses the Soft Byte Ltd website from where a variety of video tutorials can be viewed and downloaded to the local computer. Various procedures like knitting garments, designing a stitch pattern, basic principles of Original Pattern Drafting, Interactive Knitting and many more procedures can be viewed at leisure ([See also Tutorials on page 286](#)).
- **Help / Web Updates** presents options to update the Program, Help and Manuals from the internet. Before contacting Support it is important to ensure the latest program and help files have been installed ([See also Updates on page 194](#)).
- **Help / Technical Support** displays up a dialog with phone number and email address as well as technical information about the program which may be needed when contacting Soft Byte Ltd. Before contacting the Help Desk it is good practice to update the program, which can be done from this screen, to see if the problem can be solved in this way. If not, the email link in the dialog should be clicked, regardless of whether it opens the local email client, because it places all relevant information in the clipboard. This information can then be pasted into the body of the email client that is opened, or a different email program if this is necessary or preferred. Pasting can be done by whichever method is used in the email program or by using "Ctrl-V".

The Windows Clipboard will contain technical data - please paste it into your email (use Edit / Paste when starting your email text).  
Email for technical support [support@softbyte.co.uk](mailto:support@softbyte.co.uk)

- **Help / About** displays a dialog like the one shown on the right. As well as displaying the product level, current program version and license number, this dialog provides access to Technical Support, National (UK) Distribution and DesignaKnit International. These sites give access to information about Products, Solutions, Orders, Downloads, Training, Support and Contact.



- **Help / Credits** contains a listing of contributors to DesignaKnit 9 ([See on page 290](#)).

The Help that is provided with DesignaKnit can be viewed either in a Windows Help format or as a PDF, depending on whether the *Help / Contents* or *Help / Manual* menu option is selected. Both have their own formats although the content itself is the same. There are some differences in presentation and handling that have been described below.

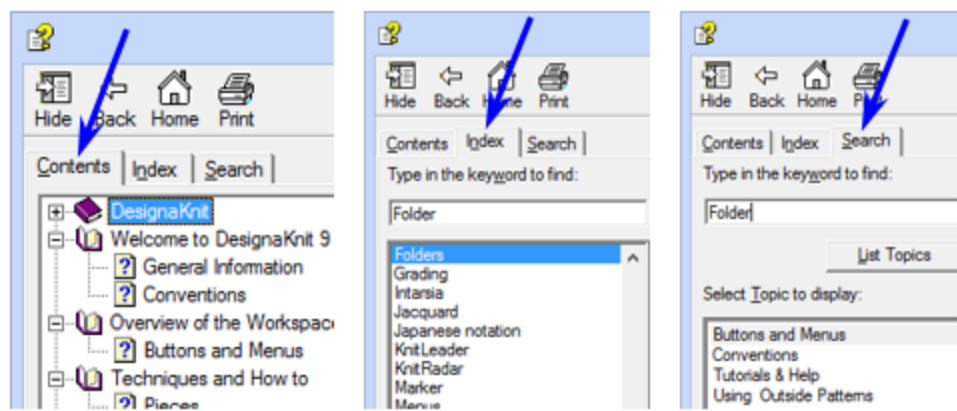
Each manual is specific to the section that it is accessed from, containing specific information as well as information that is common to all sections. This means that for example, Help for Stitch Designer 'Design Tools' is only accessible in the Contents or Manual of Stitch Designer, while Help for 'Printing Shapes' or 'Methods of Knitting' are accessible from all sections.

Email [support@softbyte.co.uk](mailto:support@softbyte.co.uk) or telephone **+44 (0)1691 828556**

## Contents

The *Help / Contents* menu option opens a Help Window on top of the DesignaKnit workspace. However, this Help file can be minimized, resized or moved so that DesignaKnit can be worked in at the same time.

The Help file opens at the "Welcome" page which shows the currently opened program section and product level in its Title bar. The top of the Help screen itself shows only the program section, which is "Interactive Knitting" in the example below.



As well as looking through the "Contents" of the Help files which lists all the topics, both "Index" and "Search" have been provided to facilitate finding the correct information as easily as possible.

▼ Method A  
▼ Method B  
▶ Method C  
separates each

Where drop down menus have been provided, the

little triangles ▼ and ► can be clicked on to open or close the full text. After navigating away from the drop down page, such as would happen when a (hyper)link is followed, and using the back arrow to return to the page, the drop down texts will have been closed, displaying their title only.

**Contents** - displays all the topics within the Help Section. Clicking the "+" sign next to a topic expands it to show the various levels underneath while clicking the "-" sign will collapse them.

**Index** - an index has been provided for the most commonly required keywords. Starting to type in the box will display the Index word in the box below. Double clicking the word in the list box will jump directly to where the most important instance of that word is located. Either single words can be entered or a search term can be typed in, enclosed by double quotation marks. E.g., typing **stitch pattern** will find each instance of **stitch** and **pattern** and highlight them separate from each other. Typing **"stitch pattern"** will find the complete term.

**Search** - locates the word that is typed wherever it occurs, listing the topics and highlighting the specified word in the text of each topic when it is double clicked. Once a topic has been opened the search word is highlighted wherever it occurs and can be scrolled for, or "Ctrl-F" can be used within the topic to find the text that is needed. Only occurrences of whole words can be found when using "Search" while "Ctrl-F" will find any text that is entered.

Drop down sections have to be expanded in order to find search text in them.



The image on the left shows the top left hand corner of the Contents Help file. Clicking on "Show" will display the navigation pane where the topics are listed if they are hidden, in which case the button reads "Hide", which, when clicked on, will hide the navigation pane. The "Back" button will step back through the visited links, including links that have been provided in images, while the "Home" button

displays the Welcome page.

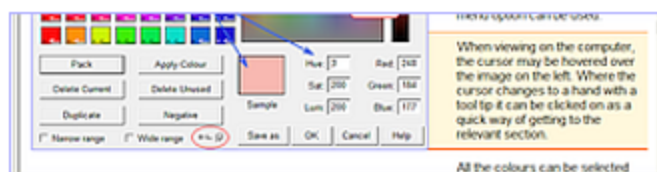
If the "Back" button does not seem to behave as expected and returns to a different location than where the cursor was, this is due to the fact that Windows returns to the last known (hyper)link location. If a user has scrolled down on that page, Windows does not see this as a link location. I.e., a user has opened the table with menu options and clicked a link to go to the "View" section then went on by scrolling to read further down the page to "Options" and followed a link from there to a different page. Clicking the "Back" button will return to "View" and not to "Options" in the menu table. The quickest way to get to the desired location can be to click the "Top" button and use the links to get as near as possible.

Some images contain links that can be clicked on to quickly access relevant information as long as the document is viewed on the computer. This is made clear in the text close to the image, as well as the fact that the cursor changes to a hand when hovered over the image. It can then be clicked on as a quick way of getting to the relevant section.

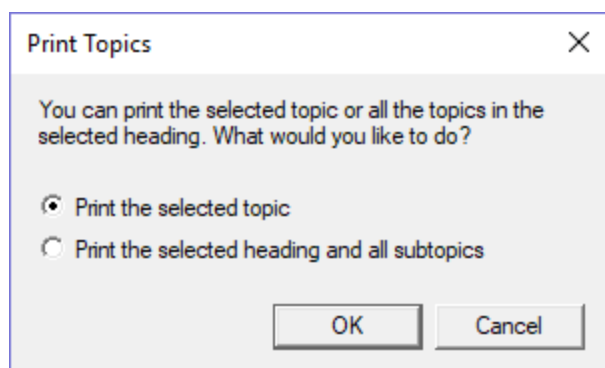
Some of the images in the Contents Help files have been shrunk to thumbnail size to make for easier reading. The images can be viewed at their full size by clicking on them, then shrunk to thumbnail by clicking once more or pressing the Esc key. In rare cases the image does not fully fit on the screen and the right hand side, rather than the left will show. This can be overcome by exiting the image and enlarging DesignaKnit to full screen, or by hovering the mouse over the right hand edge until the cursor changes to a double arrow, then clicking, holding and dragging the program window to the required size. When the thumbnail is accessed again it will display in full.



Occasionally a paragraph will run over an image to its left, due to the mysteries of software. If this happens, as shown in the top image on the left, the underlying image, which may have links that can be followed, is not accessible.



Resizing the program window by clicking, holding and dragging its right side to either right or left, will overcome the problem, as shown in the lower image, and make all links available. Alternatively, Contents Help may be viewed at full screen size by clicking the "maximize" button in the top right hand corner.



Clicking on the "Print" button displays a dialog from which "print the selected topic" or "print the selected heading and all subtopics" can be chosen.

However, this is not the recommended way to print from the Content Help files, as it includes unnecessary and cluttering information. It is a lot easier to open the PDF manual from *Help / Manual* and select the print material from there.



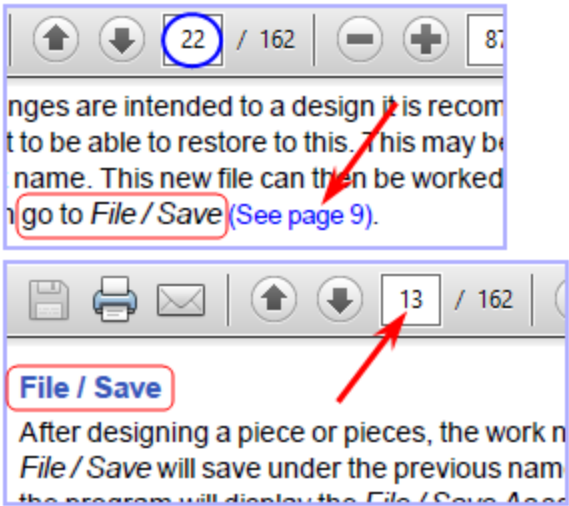
The 'Top' button has been provided at the bottom right hand side of the Contents Help screens to facilitate navigation. It can be the quickest way to go to the start of the current topic and step through links to get to the desired position.

## Manual

The *Help / Manual* menu option opens a PDF (Portable Document Format) version of the Help file. The PDF may be moved, minimized or resized and can be kept open at the same time as working in DesignaKnit.

It is most easily viewed in Adobe Acrobat Reader, which, if not already installed, can easily be downloaded from the internet. The look of the PDF is dependent on the version, type and settings of the installed PDF viewer. The table of contents starts on page 2 of the manual. The bookmarks which can be displayed by using PDF settings in the Reader relate to the various chapters, and while they may be the easiest way to navigate through the contents, they are not a table of contents as such. An Index has been provided at the end of the document and, if viewed on screen, the keywords can be accessed by clicking on the page number after the entry.

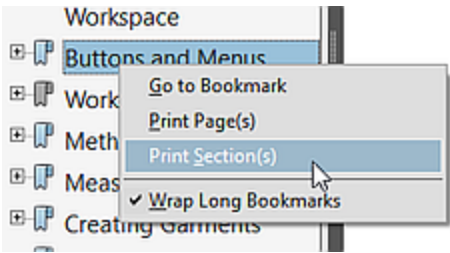
If the Manual is viewed on the screen, any provided links can be followed by clicking on the accompanying references or page numbers. Some images contain links that can be clicked on to quickly access relevant information as long as the document is viewed on the computer. This is made clear in the text close to the image, as well as the fact that the cursor changes to a hand when hovered over the image. It can then be clicked on as a quick way of getting to the relevant section.



The page numbers referred to in the PDF point to the page numbers in the printed version and not the PDF file itself. There is a difference because the physically printed version does not include the title page and table of contents in its numbering, whereas the digital PDF does.

In the example on the left, clicking on "See page 9" goes to the 13th page in the digital PDF, which is page 9 in the print version. The difference consists of the total number of pages of title and table of contents, which in this case was 4. The required page number can be entered directly in the page number box (see blue circle). Adding whatever number of pages are made up by title and table of contents to the page number referred to in the link will open the correct page.

Mini table of contents are provided as a means of accessing the information efficiently when the PDF is viewed on the computer. If it is printed, the page references will point to the correct pages.



Printing from the PDF can be done by right clicking on one of the bookmarks and selecting the option to "Print Page(s)" or "Print Section (s)".

In the example on the left, "Buttons and Menus" was clicked on, then right clicked to access the options shown.

## Good Practice

<b>Backups</b>	<b>193</b>
<b>Updates</b>	<b>194</b>
<b>Documenting with Screen Prints</b>	<b>194</b>

## Backups

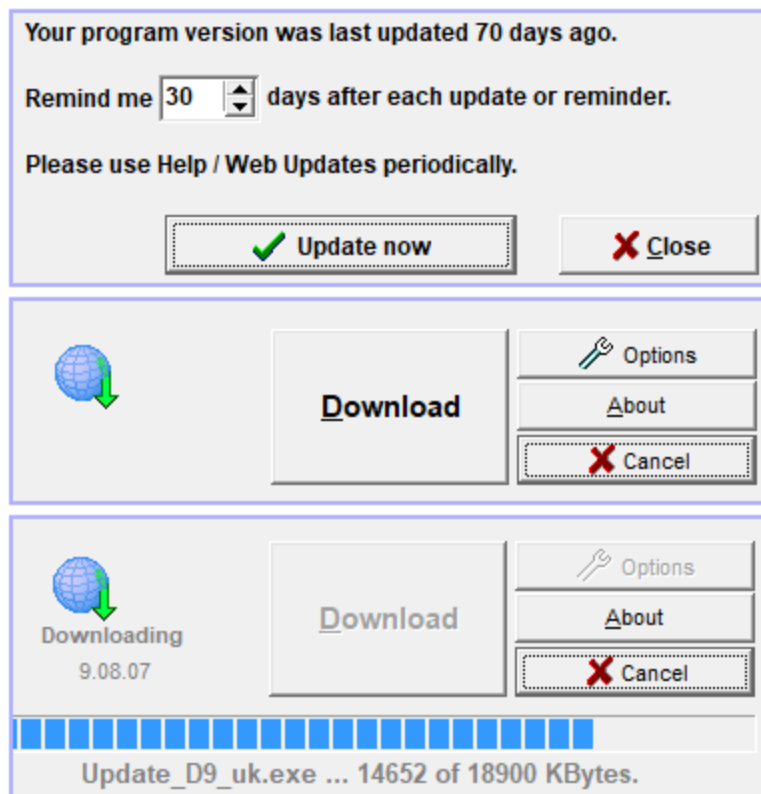
Making regular backups of the designs will safeguard any work done. Backups can be made by simply copying the shape files to a different location, such as a USB stick, an external hard drive, Cloud storage if available or even sending the files to a different email address.

When major changes are intended to a design it is recommended to work with a copy of the shape file, leaving the original intact to be able to restore to this if necessary. This may be achieved by opening the shape file and saving it under a different name. This new file can then be worked with, while the original remains unchanged ([See on page 242](#)).

It is a good idea to make a backup of a piece before working in Exact Stitch Layout as undoing changes by reverting to before Exact Stitch Layout will result in all changes being lost, not just the Exact Stitch Layout changes. The piece can be copied by making it active, then selecting *Piece / Duplicate* from the top menu bar, giving it a name and moving it to a convenient location on the workspace.

This is also a good idea when experimenting with pieces and making changes that are complicated. Another way is to start a new shape file and import pieces from previously created designs. More information about importing pieces can be found in the Original Pattern Drafting manual.

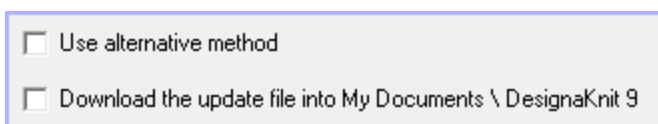
## Updates



From time to time, if there is a new version, DesignaKnit will prompt to download updates, at which point the interval between update prompts may be changed if desired, as can be seen in the top image in the left. Clicking "Update now" will present the second dialog.

The program can also be updated by going to *Help / Web Updates / Program update* or clicking "Program update" after accessing the *Help / Technical support* menu option. If there is an open, unsaved design on the workspace, DesignaKnit will prompt to save this before proceeding. Clicking the "Download" button might pop up another dialog informing of the current version. On accepting, downloading will start and show a progress bar on the screen as shown in the bottom image. When finished DesignaKnit will restart with the opening screen.

The process can be repeated for updating Help and Manual files.



Clicking "Options" on the first download screen will display the options shown on the left. These should only be used if advised by the Soft Byte Ltd help desk. "Use alternative method" will update in the background, even though nothing appears to happen. Ticking "Download

the update..." and clicking "OK" returns to the main download manager screen from where "Download" can be clicked again to save the file to the folder specified (Documents \DesignaKnit 9). From this location it can be double clicked to install. When using this method, DesignaKnit needs to be closed and the update file needs to be navigated to. Depending on the Windows version and the current Windows user, permission will be needed to continue, after which installation proceeds and the program will start with the opening screen when finished.



Before contacting the Help Desk it is prudent to update all parts of DesignaKnit to see if this solves any issues.

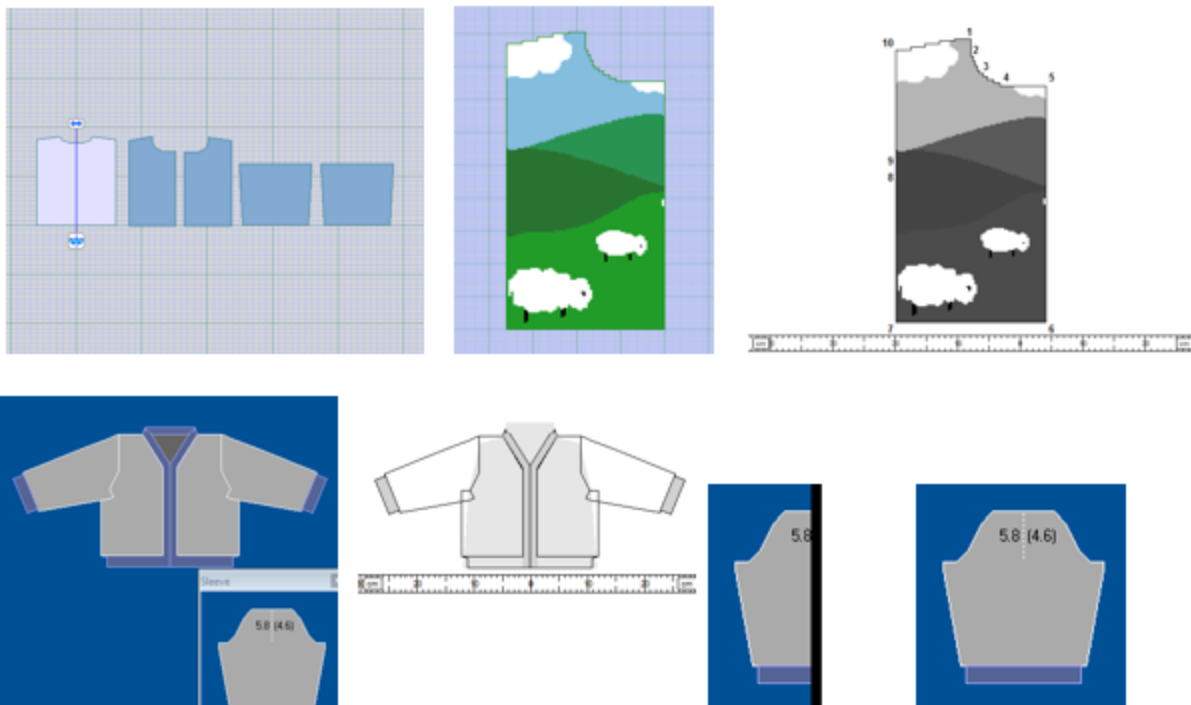
## Documenting with Screen Prints

Documenting is useful to keep track of all shape files, patterns and stitch designs created. There may also be a requirement for providing instructions for publication or distribution to other parties. In both cases an external program such as Word may be used. As well as being able to use the PrintScreen or Alt-PrintScreen Windows

keys to copy the entire desktop or just the active program window respectively, DesignaKnit provides an option to copy its design space to the clipboard after which it can be pasted into other programs.

Using the menu option *Edit / Copy Design Space to Clipboard* in Original Pattern Drafting, *Edit / Copy* and *Edit / Copy Sleeve* in Standard Garment Styling or *Edit / Copy* in Stitch Designer will do just that. Opening another program and using its native Paste option, or "Ctrl-V" will paste the Design Space as it is. Prior to using this option the design space can be manipulated in such a way that all the desired elements are visible, such as monochrome display, numbers, pattern, ruler, active piece only, body block showing etc. The piece(s) can be zoomed to the exact size needed in Original Pattern Drafting, whereas Standard Garment Styling does not have this option, although the DesignaKnit program window can be zoomed in or out to go some way towards sizing the image. The design space is copied exactly as it is, which could result in various images such as the ones that are shown below. Some examples of Original Pattern Drafting images are shown at the top and Standard Garment Styling images underneath.

When the design space is copied, the program takes a screen shot of the entire workspace, regardless of the size of the piece on it. In Standard Garment Styling the sleeve can either be shown on the workspace, be in a floating window that is dragged away from the DesignaKnit workspace, or not shown. In each case the result of *Edit / Copy Sleeve* is different. In all cases the resulting image will be the size of the sleeve window, whether it is displayed fully or not. If the sleeve window is not floating and only partially shown the resulting image will have a black border on the side(s) where it leaves the workspace, as shown in one of the sleeve images below. A floating sleeve window will be copied as a complete image wherever it is positioned on the screen.



The resulting image can be resized, cropped and manipulated in the receiving program.

# Knitting Information

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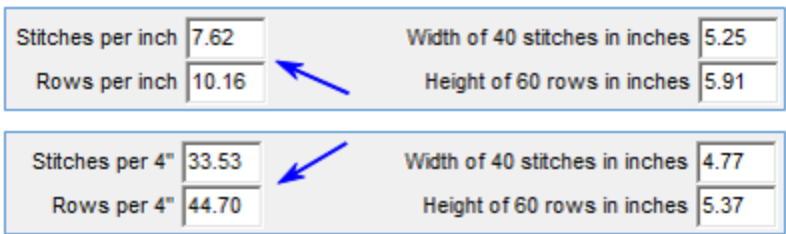
## Tensions

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### Tension dialogs

The larger "Tensions + Notes for .." dialog ([See page 197](#)) will be opened when selecting the *Options / Tensions + Notes* menu option in Original Pattern Drafting and, if a shape file is open, the *Options / Tensions* menu option in Stitch Designer, Standard Garment Styling and Interactive Knitting. Shape files have their own tensions which are set in Standard Garment Styling or Original Pattern Drafting and these can differ from the general Stitch Designer tension.

The smaller "Tensions" dialog ([See page 198](#)) will be opened for a stitch pattern file in Stitch Designer and Interactive Knitting on selecting *Options / Tensions*.



The display in centimeters (see darker blue arrow in image below) has come from the settings in *Options / Units of Measurement*. If "tensions per inch" was specified it would read inches and if "tensions per 4 inches" was specified it would be displayed as that, as indicated by the blue arrows in the images on the left. Switching from one setting to another

recalculates the values. For the purpose of explanation the centimeters option is used here.

**Tensions + Notes for Untitled**

**Main Tensions**

Stitches per 10 cm: 30.00  
 Rows per 10 cm: 40.00  
 Width of 40 stitches in cm: 13.33  
 Height of 60 rows in cm: 15.00

Buttons: Set from shape file, Reset, Set as default, Show default

**Rib, Cuff, and Neckband Tensions**

Stitches per 10 cm: 33.00  
 Rows per 10 cm: 44.00  
 Width of 40 stitches in cm: 12.12  
 Height of 60 rows in cm: 13.64

**Tension dial setting or needle sizes**

**Notes about this shape file**

(4000 characters left)

Buttons: OK, Cancel, Help

### Larger Tensions dialog -

This dialog is accessed from *Options / Tensions* in Standard Garment Styling and Original Pattern Drafting because these sections deal with shape files. It is also opened from Stitch Designer when a shape file is open and from Interactive Knitting when knitting a garment piece from a shape file.

When a shape file is first opened in Stitch Designer, another dialog appears to ask whether to use the tension from the stitch pattern, shape file or a different tension altogether. More information about this can be found in the Stitch Designer manual.

When the tensions are known they can be entered in either of the sets of boxes indicated by the red ovals.

Tensions can be entered as

"Stitches / Rows per 10 cm" or the actual size of 40 stitches and 60 rows can be physically measured and entered. Entering in one set will automatically adjust the other.

The tension dialog refers to rows of finished fabric. For machine knitting there may be multiple carriage passes for each row of finished fabric.

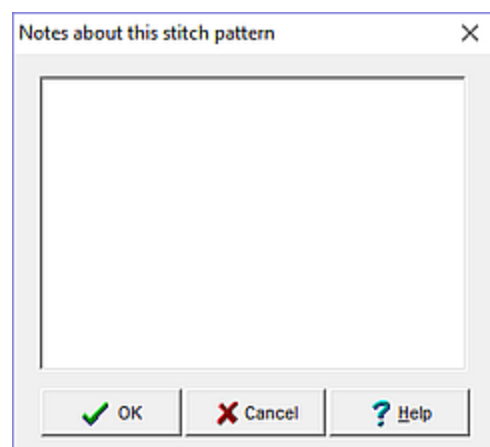
Rows are sometimes referred to as 'courses', and stitch columns as 'wales' in knitting instructions.

Rib, Cuff and Neckband Tensions (see red arrow) can be entered as different to the main garment piece to ensure that the finished garment will fit snugly. The number of stitches could be set higher to result in a tighter band, or the knitting could be made tighter by switching to a different dial setting or needle size while keeping the same number of stitches. Either way, it is best to knit a tension swatch to be certain of the outcome!

The "Tension dial setting or needle sizes" section can contain up to 50 characters, while "**Notes about this shape file**" can contain up to 4000 characters, as indicated by the counter at the bottom of the dialog, which shows how many characters can still be typed (see light blue arrow above). Both of these sections can be filled as required, with reminders about why a certain tension was chosen or any other information that is relevant to this particular shape file. The text in these boxes can be searched on in the "Thumbnails" view when opening a shape file.

In addition to entering the tensions manually, they can also be obtained from existing files, set from default or set as default and the default values can be viewed ([See page 199](#)).

The information that is entered in the Tensions dialog is saved with the shape file, so when that file is reopened in Standard Garment Styling, Original Pattern Drafting or Interactive Knitting, it will open at the saved tension setting. Stitch pattern files in Stitch Designer do not have a tension setting of their own as they could be used with different shape files (garment pieces) and will most likely need to take on those tensions.

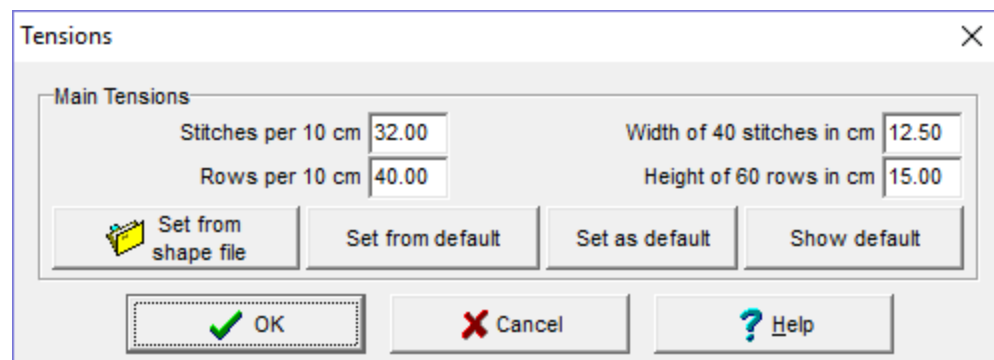


Therefore it is important to make a note of the tension used in designing the stitch pattern, together with other relevant information such as which yarns were used, needle size or knitting machine settings etc. This can be done by using the *Edit / Notes* menu option in Stitch Designer, which opens the **"Notes about this stitch pattern"** dialog as shown on the left, which can contain up to 360 characters.

As well as tension settings, it may be useful to document which shape file (garment piece) this particular stitch pattern is used for.

Working with the correct tensions is required for the knitted result to be as designed and expected.

On saving, the notes information is kept with the individual shape file for future reference, with the added benefit that this information can be searched for in the Thumbnails browser.



**Smaller Tensions dialog - A** smaller version of the "Tensions" dialog will open if there is no shape file involved. Tension can be changed temporarily in this smaller dialog for Stitch Designer, Interactive Knitting and DesignaKnit Graphics Studio and will revert to the default tension after closing any of

these sections.

Tensions for Shape files are saved with the shape file and Tensions for stitch patterns are transient as the same stitch pattern may be applied to different shape files with different tension requirements.

The dialog serves different purposes in the different sections of DesignaKnit.

- In Stitch Designer, if there is no open shape file to be integrated with the current stitch pattern it can be used to visualize how a different tension could affect a stitch pattern. As stitch patterns can be used for different shape files which can all have different tensions, the changes made here are not permanent.
- Although it is possible, there should be no need to change the tension in Interactive Knitting before starting to knit because it is determined in Original Pattern Drafting and Standard Garment Styling (after knitting and measuring a swatch). It is then saved with the shape file and incorporated within the garment pieces.

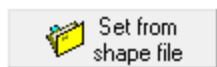
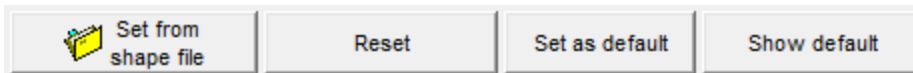
- In DesignaKnit Graphics Studio the small tension dialog is used to provide recommendations of the grid dimensions. Suitable No. of Stitches and No. of Rows values can be determined for Picture Image types before converting a graphic file to a stitch pattern of the desired proportions.

If "Set as default" is clicked, the DesignaKnit default tension will change and will be offered for each new shape file in Original Pattern Drafting and Standard Garment Styling, as well as for each stitch pattern file that is opened in Interactive Knitting, DesignaKnit Graphics Studio and Stitch Designer if a shape file is not integrated.

As soon as a shape file is opened and associated with the current stitch pattern the larger "Tensions + Notes for.." dialog ([See page 197](#)) will be displayed when *Options / Tensions* is selected.

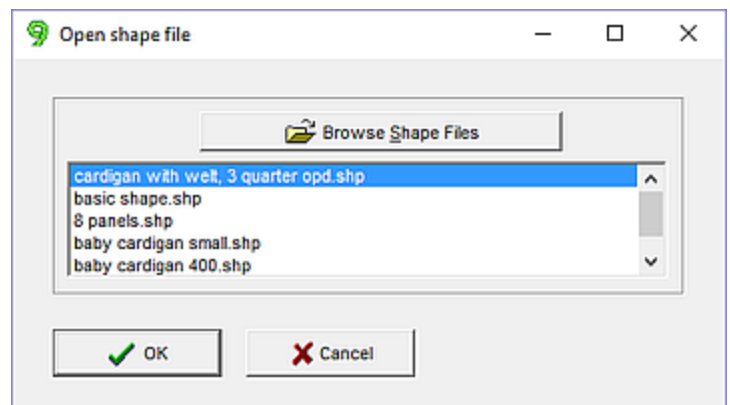
## Tension buttons

The Tension dialog provides the different buttons shown below to set and reset Tensions for the current stitch pattern or shape file.

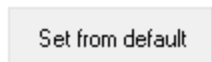


Tensions can be taken from another shape file by clicking the "Set from shape file" button.

The "Open shape file" dialog is then opened to allow selection of the files shown in the box (see on the right), or to browse for more shape files. The five shape files that were last opened in DesignaKnit, whether from Original Pattern Drafting or another section, will be displayed. This option is particularly useful where identical yarns and needles or machine settings are used for a range of garments or pieces that are similar to each other, but not standard.



Selecting a file here does not open the shape file, it merely applies the tension that is used in that shape file to the current garment piece or stitch pattern. Clicking the "Browse Shape Files" button opens the "Open Shape File" thumbnails view in which tensions are displayed when the "Details" box is ticked.



The tensions for the current shape file can be set from the default values. Clicking this button will copy the current default values to this shape file in Original Pattern Drafting, Standard Garment Styling and Interactive Knitting. In Stitch Designer this will apply the Stitch Designer tension to the stitch pattern on the workspace.

Set as default

When this button is clicked the default values will be replaced by the values of the current shape file. This option is useful when it is anticipated that the current tension values will be used as a basis for all or most new pieces. The default values can be reconfigured as often as needed.

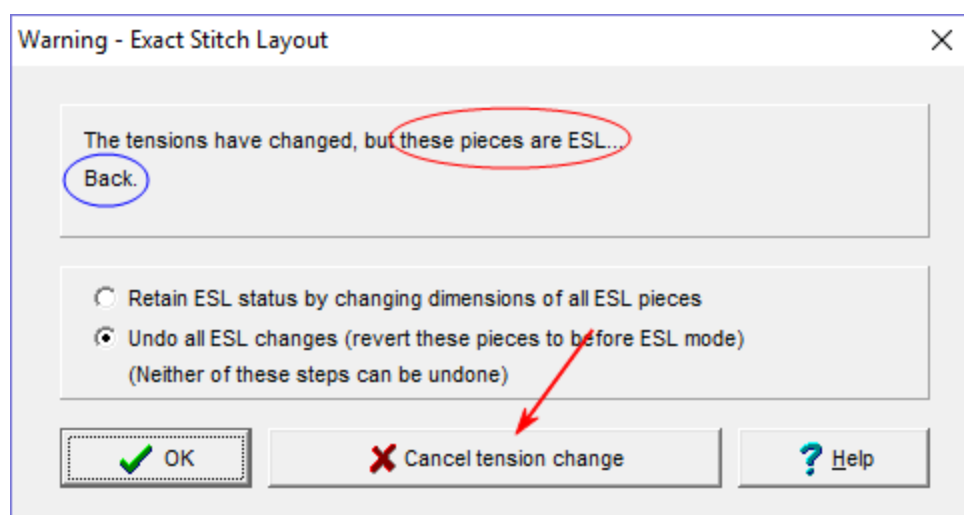
This option sets the default tensions for all sections of DesignaKnit, affecting all new shape and stitch pattern files. It does not affect the tension settings of existing files.

Show default

Clicking on the "Show default" button displays the defaults as they are currently set in DesignaKnit 9. Initially these are the values of the program, but when clicking the "Set as default" button at any time the values will be replaced for this and subsequent shape files. Any existing shape files will keep the tension that was set for them.

## Tensions and Exact Stitch Layout

If tension changes are made to a piece that has been edited in Exact Stitch Layout the following warning appears:

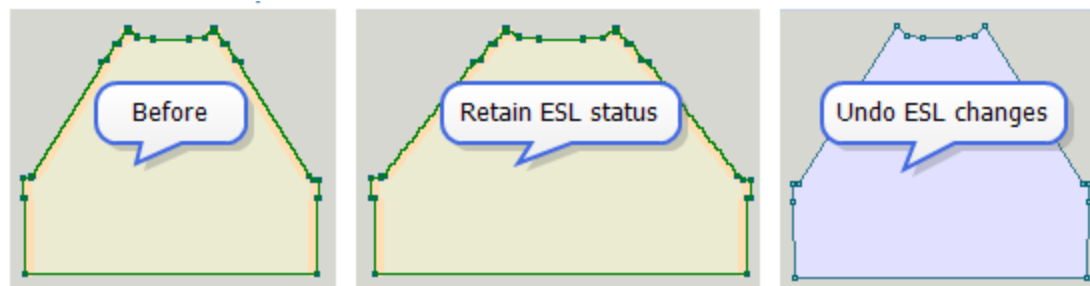


The name of the active piece ("Back") is shown in the blue oval. Selecting the option to "Retain ESL status..." will result in the active piece adjusting shape to take the tension change into account. Selecting the "Undo all ESL changes (revert..." option will leave the shape of the piece as is, but will change the status of it to a normal piece on the workspace. Thereafter it will not be an Exact Stitch Layout piece anymore. The results of both options are shown in the images below.

Selecting either of the options is a non reversible action and cannot be undone unless the shape file is exited without saving!

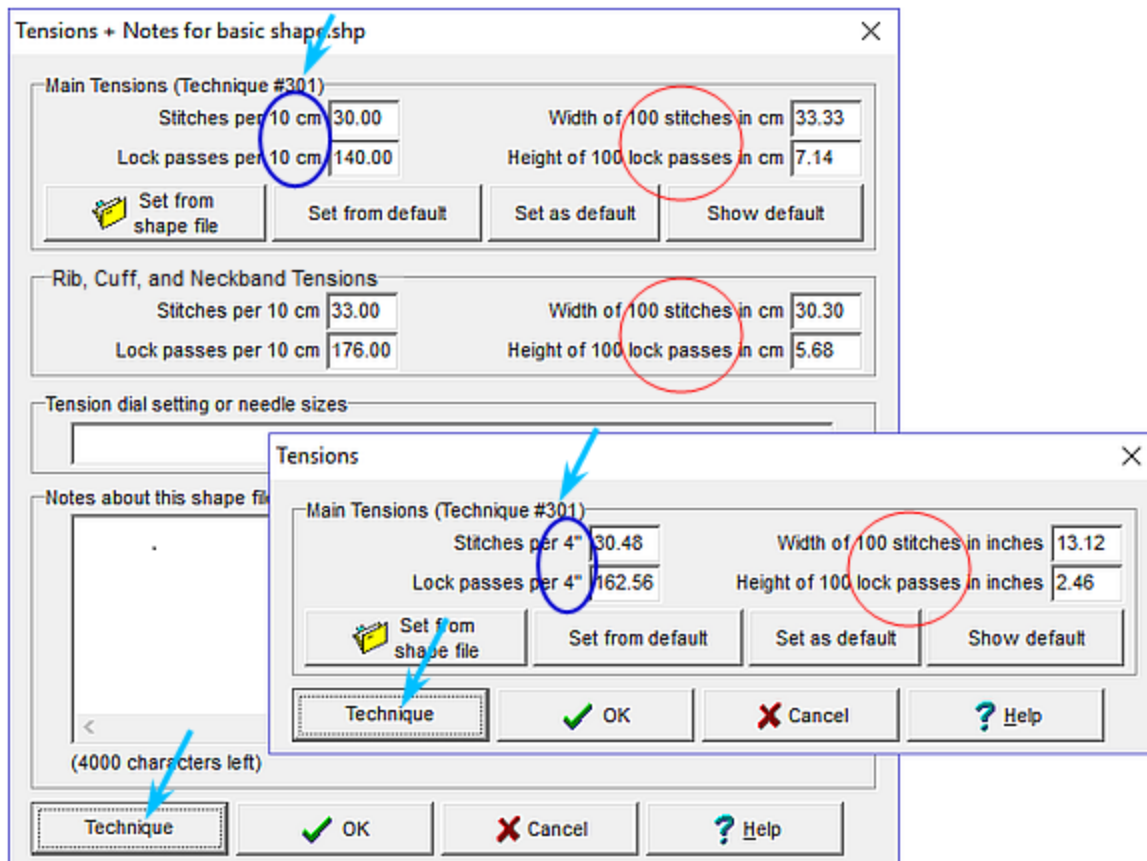
Selecting "Cancel tension change" will abandon the action.

It is highly recommended to set any tensions correctly before entering into Exact Stitch Layout mode.



## Tensions and Passap

The Tensions dialog is slightly different for Pfaff / Passap E6000 / E8000 knitting machines, as shown in the images below. The main "Tensions + Notes for..." dialog appears when *Options / Tensions* is accessed for a shape (garment piece) file, while the smaller "Tensions" is displayed for stitch patterns.



While there are notable differences for the Tension dialog when a Passap machine is selected, the 'Notes' and 'Tension dial setting or needle sizes' are the same as for other knitting machines.

A "Technique" button appears at the bottom of the dialog (See also [Technique numbers on page 260](#)) and the Technique number that is used is displayed after "Main Tensions" in the dialog (see light blue arrows).

*Options / Units of measurement* has been selected to display centimeters in the larger dialog. To illustrate the difference, the "tensions per 4 inches" setting which is more commonly used for Passap, has been used for the smaller dialog (see darker blue ovals).

Furthermore, tension is measured in stitches and lock passes (see red circles) instead of stitches and rows. Tensions are entered as follows for Passap knitting machines:

- Vertical tensions are entered as **lock passes** instead of pattern rows. A lock pass is equivalent to a carriage pass. When using Jacquard knitting one row may consist of several lock (or carriage) passes to knit all the colors in the pattern. Passes of the locks are not usually the same as rows of a stitch pattern (which are grid rows on the screen). When knitting a swatch for calculating the tension additional lock passes may be required to knit each row or pair of rows, according to the technique. The E6000, E8000 and Duomatic (punch card) machines generally knit two complete rows for every row that is drawn on the punch card or downloaded to the knitting machine. E.g., a color pattern that has 10 rows on the

DesignaKnit workspace will usually be twenty rows when knitted. There are exceptions to this rule when choosing a technique that does not double the rows, such as techniques 129, 135, 172, 179, 252, 253, 254, and 255.

- The swatch size is 100 stitches by 100 lock passes instead of 40 stitches by 60 pattern rows. Users who prefer to measure swatches using the 40 stitches x 60 rows method can still do so by temporarily selecting a different type of knitting machine and entering the values in the tension dialog. Changing to Pfaff / Passap E6000 or E8000 before printing or knitting interactively will automatically convert the entries to the new format.
- Garment shape files that are saved with tensions in terms of pattern rows rather than lock passes will convert automatically on switching to a Passap knitting machine.

## Estimating tensions

Until a stitch pattern is designed, knitted and measured the exact tensions to enter into DesignaKnit are not known. However, tensions need to be entered to design and knit. While the default tensions could be used, it is better to start with a grid which approximates the correct dimensions for the stitch pattern and technique used. This will avoid distortion of the finalized stitch pattern.

To estimate the tensions prior to designing a stitch pattern or garment one of the following methods could be used:

**Method 1:** for Bird's-eye Jacquard, using a common combination of yarn and technique and if a little distortion is acceptable

- For 2 color Jacquard using technique 180 and 3 ply yarn: 28 stitches and 23 rows to 10 cm (4 inches)
- For 3 color Jacquard using technique 195 and 2 ply yarn: 32 stitches and 23 rows to 10 cm (4 inches)
- For 4 color Jacquard using technique 207 and 2 ply yarn: 32 stitches and 18 rows to 10 cm (4 inches)

**Method 2:** for any technique and yarn, resulting in exact proportions

- An existing pattern needs to be selected, or a simple draft pattern designed, similar in construction to the desired new pattern and using the same knitting technique! A 40 stitch by 60 row test swatch should be knitted, starting and ending with 20 rows of waste yarn. The 60 rows are 60 lock passes, not 60 complete rows of pattern.
- For E6000 machine, the console should be programmed until TEST appears, then ENT and the swatch needs to be knitted by following the instructions on the console. A cast on method, suitable for the knitting technique, should be chosen, such as "cast on 6" for single bed knitting and "cast on 2" for full needle rib (Jacquard) knitting.
- After resting the sample (as is usual for a tension swatch) it needs to be measured with a ruler that uses centimeters. The exact measurements need to be recorded and not rounded up or down, so that if 10 stitches measure 4.2 centimeters this is the measurement that is used. If the units of measurement are not already in centimeters, this needs to be set in *Options / Units of Measurement*.
- The number of stitches per 10 centimeters now needs to be calculated. Supposing the swatch is 40 stitches wide and measures 25 centimeters in width, the number of stitches that are needed to produce 10 centimeters would be calculated by dividing 400 (40 stitches times 10 centimeters) by 25 (the physical measurement of 40 stitches). This is 16, which is the number to be entered in the "Stitches per 10 cm" box in the Tensions dialog.

To simplify: if 40 stitches measure 25 cms, then 1 cm equals 40 divided by 25 and 10 cms equals 400 (40 times 10) divided by 25.

- The calculation for the grid rows is similar, but also needs to take the Technique number into account, as each Technique has a different number of lock passes per grid row. Supposing the swatch is 60 physical rows and measures 16 centimeters in height, the number of rows that are needed to produce 10 centimeters would be calculated by dividing 600 (60 rows times 10 centimeters) by 16 (the physical measurement of 60 rows), which is 37.5. However, this number needs to be multiplied by the number of lock passes per grid row. The correct number of lock passes can be found by clicking on the "Technique" button in the Tensions dialog and entering the required Technique number. After this, the correct number of passes per row will be displayed, which will be the multiplication factor. Using Technique 176, the multiplication factor is 4 and 37.5 will need to be multiplied by this. The resulting value of 150 can be entered in the "Lock passes per 10 cms" box in the Tensions dialog.

To simplify: if 60 physical rows measures 16 cms, then 1 cm equals 60 divided by 16 and 10 cms equals 600 divided by 16, which is 37.5 rows. As rows are made up of a different number of lock passes (depending on the Technique number) and lock passes, not rows, need to be entered, the outcome needs to be multiplied by the 'passes per row' multiplication factor of the Technique.

- Although centimeters are generally used, the same calculations can easily be made for inches. E.g., if 60 physical rows measures 6.3 inches, then 1 inch equals 60 divided by 6.3, which is 9.52 and 4 inches (which is the usual tension setting for Passap) equals 9.52 times 4, which is 38 rows. This needs to be multiplied by the Technique multiplication factor. As this was found to be 4 in the example used, the resulting 152 (slightly more than the equivalent calculation in centimeters) can be entered in the Tensions dialog.

The number of stitches and lock passes, as obtained by the above calculations, are the numbers to be entered in the Tensions dialog of Stitch Designer, Original Pattern Drafting, Standard Garment Styling or Interactive Knitting in "Stitches per 10 cms (or 4")" and "Lock passes per 10 cms (or 4")" respectively, after which DesignaKnit will calculate the correct measurements.



The correct tensions should be used throughout. Small discrepancies can have big consequences. Setting the correct tensions makes the difference between a perfectly sized piece and one which leaves a lot to be desired.

DesignaKnit assumes an overall average tension within the same stitch pattern or shape but, as any knitter knows, different elements of the pattern can produce varying tensions within those elements, which can affect the overall length and width of the finished item. It is up to the knitter to decide whether the stitch pattern is altered to fit a given measurement, or whether the measurements are altered to accommodate the stitch pattern. Shape files are changed in Original Pattern Drafting or Standard Garment Styling while stitch patterns can be altered in Stitch Designer.

## Tension Swatch

The finished result is affected by the thickness and quality of the yarn used, the settings of the knitting machine, the size of needles used and the actual tension. Although there are initial default settings in the program it is necessary to knit a tension swatch with the yarn to be used and the needle sizes or machine setting intended as there are numerous factors influencing the resulting tension. Once the correct tensions have been entered in *Options / Tensions* of the relevant section of DesignaKnit, these values are taken into account in Yarn Calculator ([See on page 158](#)) to accurately calculate the amount of yarn needed for the finished design.

Interactive Knitting provides an easy way of producing a tension swatch from a stitch pattern for both hand and machine knitting, which is described in the Interactive Knitting manual. If there is no stitch pattern, the following, very general instruction of how to knit a tension swatch could be used. More examples can easily be found on the

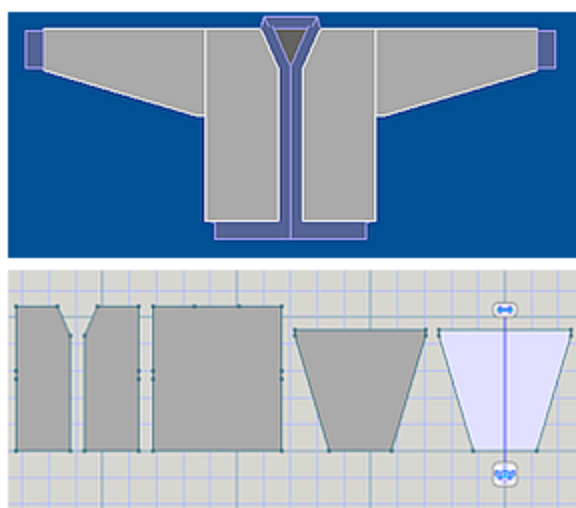
internet, or in the manual of the knitting machine. When designing stitch patterns it is a good idea to knit the tension swatch including all the yarns and different stitch types involved to arrive at an accurate result.

- Start by casting on 28 stitches. Work the swatch in stocking stitch until it measures 14 centimeters. Keeping the first and last 2 stitches knit on every row helps the edges to lay flat.
- 1st row: knit  
2nd row: knit 2, purl to last 2 stitches, knit 2
- Repeat these 2 rows until the swatch measures 14 cm ending with a 2nd row. Break yarn off, slip it through the stitches and take them off the needle. Don't cast off as this can distort the stitches.
- Optional, but highly recommended: Wash and dry the tension swatch as you would treat the finished garment to allow for any shrinking or stretching that may take place during normal use. If this step is used the piece may need casting off first, in which case several more rows could be knit before casting off.
- Lay the swatch flat and place a ruler horizontally on it. Put a pin at the side of one 'v' and another pin 10 centimeters away. Count the stitches by counting the number of 'v' shapes horizontally between the two pins, including any half stitches.
- Now place the ruler vertically on the swatch. Put a pin at the bottom of one 'v' and another pin 10 centimeters away. Count the 'v' shapes between the two pins, including any half stitches.

The results of this exercise can be entered into the program with appropriate notes. This can be done for each piece, or the values can be made default so they are used every time a new project is started ([See on page 196](#)).

## Rib

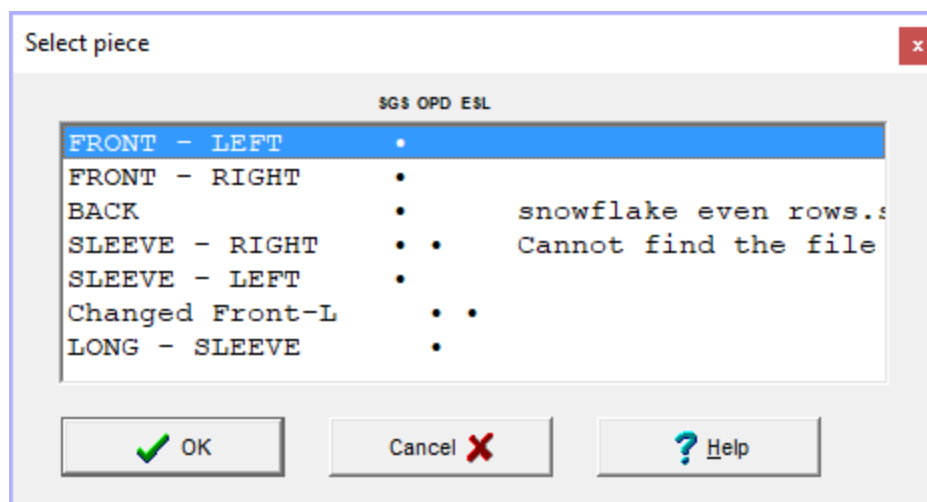
"Rib" is a general term to describe the finished edge of a garment, such as the bottom of a sweater, cuff of a sleeve or neckband. Rib is generally created at the beginning of the piece, is usually formed by a different technique such as rib and is usually set at a tighter tension to allow for a good fit ([See page 197](#)). Rib can also be designed as a separate piece in Original Pattern Drafting and attached later by sewing or picking up stitches.



Whereas ribs are visibly shown by a different color and in proportion to the rest of the garment in Standard Garment Styling, they are absent in Original Pattern Drafting, as illustrated by the top and bottom images on the left.

Rib can be defined and altered in Standard Garment Styling. Any changes are saved in the shape file and will be taken into account in printed as well as Interactive Knitting instructions. However, opening, altering and then saving a Standard Garment Styling shape file in Original Pattern Drafting, thus converting it to Original Pattern Drafting will lose rib information for the amended garment pieces. If the shape file is subsequently reopened in Standard Garment Styling there will be a warning to the effect that Original Pattern Drafting changes will be lost on proceeding.

If a garment is designed in Standard Garment Styling, rib, cuff and neckband are part of the design and the number of rows of rib to be knitted will be shown in both printed and Interactive Knitting instructions. Original Pattern Drafting garment pieces do not have provision for rib, cuffs, neckband etc. and, if required, these have to be designed as separate pieces to be joined with the main body of knitting on assembling the separate parts into one garment.



Within one shape file pattern pieces may exist that have originated from different sources, as shown on the left. This information can be found by using the *Piece / Select Piece* menu option in Original Pattern Drafting, or it is shown when selecting a piece from a shape file in Stitch Designer and Interactive Knitting. The title bar will read "Select pattern pieces" instead of "Select piece" in Stitch Designer as more than one piece can be selected.

As long as there are pieces that have a dot in the SGS column, the file can be opened in Standard Garment Styling although all changes that were made in Original Pattern Drafting will be lost when the file is subsequently saved in Standard Garment Styling. If none of the pieces are dotted in the SGS column, the shape file cannot be opened in Standard Garment Styling.

If pieces have been integrated with a stitch pattern, the stitch pattern name is displayed to the right of the relevant piece. If a stitch pattern had been integrated but has since been deleted "Cannot find the file nnn.stp." is displayed, where nnn is the name of the deleted pattern.

*File / Print / Piece summary* shows instructions for knitting rib as well as other information regarding the garment and selected piece ([See on page 149](#)). *File / Print / Garment text* does not contain any rib information, but gives row by row knitting instructions ([See on page 154](#)). Both can be accessed from Standard Garment Styling, Original Pattern Drafting and through the *Shapes / Print Shapes* menu option in Stitch Designer.

For garment pieces that have been designed in Standard Garment Styling and that include rib, relevant instructions such as the number of rows of rib to knit will be given at the appropriate time in Interactive Knitting. The instructions for garment pieces that originate from or have been altered by Original Pattern Drafting will read: "Knit rib, if any" as the number of rows of rib is unknown.

		<b>Piece summary:</b> Knit 9 rows of rib (2.0 cm).   <b>Garment text:</b> Rows 148-153: Repeat rows 146 &amp; 147 Cast off remainder. End of piece.
		<b>Piece summary:</b> Knit 31 rows of rib (7.0 cm).   <b>Garment text:</b> Rows 128-133: Repeat rows 126 &amp; 127 Cast off remainder. End of piece.

The images on the left illustrate that rib is not a part of the Original Pattern Drafting garment pieces. Rib is shown in a different color on the Standard Garment Styling screen, but is absent from the Original Pattern Drafting workspace.

As shown here, increasing the sleeve cuff (rib) in Standard Garment Styling results in a smaller garment piece on the Original Pattern Drafting workspace when the same file is opened in there. Piece summary and Garment text printouts have changed in accordance with the ratio between rib and main part of the piece. The number of rows of rib and the last row number before casting off add up to the total number of rows of the piece. In this example, the top piece consists of 84 (9 + 75) and the bottom piece of 86 (31 + 55) rows. The difference is accounted for by the different tensions of rib and main knitting ([See page 197](#)).

SGS OPD ESL	
FRONT - LEFT	•
FRONT - RIGHT	•
BACK	•
SLEEVE - RIGHT	•
SLEEVE - LEFT	•
Front left OPD	•

*Piece / Select Pieces* was opened in Original Pattern Drafting for the image on the left and shows that the garment consists of five purely Standard Garment Styling pieces, with one piece added in Original Pattern Drafting. This shape file can still be opened in Standard Garment Styling as all the original pieces have not been changed. The new piece was added by copying an existing piece and renaming it.

A garment may be designed in Standard Garment Styling in order to include rib, cuffs and neckband, after which it can be opened in Original Pattern Drafting. Some or all of the pieces may be adjusted and thereby converted to Original Pattern Drafting pieces. This will still leave the unaltered pieces as Standard Garment Styling which means that rib information is still available for these pieces at print or Interactive Knitting stage. Any new pieces that may be added in Original Pattern Drafting will have no rib information and pieces that have been converted will have lost their rib information on saving in Original Pattern Drafting, unless the file is opened in Standard Garment Styling, accepting the "Changes will be lost" warning and saved.



Rib and Cuff dimensions that are set in Standard Garment Styling are NOT included in the Original Pattern Drafting instructions. If rib is used, Piece summary needs to be read in conjunction with Garment text.

If the Neck band measurements are chosen in Standard Garment Styling in such a way that the placement would be different - such as a lower Vee neck or wider opening across the shoulders, this will be taken into account in the main part of the garment piece in Original Pattern Drafting even though the neck band itself will not be shown or included.

Rib and Cuff dimensions are only taken into account in the Yarn Calculation ([See page 158](#)) for Standard Garment Styling pieces. They need to be added as separate pieces on the workspace in Original Pattern Drafting for them to be taken into the calculation.

## Knitting Abbreviations

The most commonly used DesignaKnit knitting abbreviations are listed in the table below. All other knitting abbreviations that are used by DesignaKnit for all the possible stitches can be found in the stitch symbols palette in Stitch Designer.

Abbreviation Machine knit	Description		Abbreviation Hand knit	Description
F	Fair Isle		Hk	Stocking stitch, flat
W	Wrong side facing		Hp	Reverse stocking stitch, flat

Abbreviation Machine knit	Description		Abbreviation Hand knit	Description
R	Right side facing		Hgk	Garter stitch, knitting every stitch, flat
2	2 color Jacquard		Hgp	Garter stitch, purling every stitch, flat
3	3 color Jacquard		Hk O	Stocking stitch, circular
4	4 color Jacquard		Hp O	Reverse stocking, circular
5	5 color Jacquard		Hgk O	Garter stitch, knit, circular
6	6 color Jacquard		Hgp O	Garter stitch, purl, circular
I	Intarsia			
CAL	Carriage on Left			
CAR	Carriage on Right			

## Needle Sizes

The table below lists needle sizes and their equivalents in different systems.

Metric (mm)	1.25	1.5	1.75	2	2.25	2.5	2.75	3	3.25	3.5
UK	16	15		14	13		12	11	10	
US	000	00		0	1		2		3	4
Japanese				0		1	2	3	4	5

Metric (mm)	3.75	4	4.25	4.5	4.75	5	5.5	5.75	6	6.25
UK	9	8		7		6	5		4	
US	5	6		7		8	9		10	
Japanese	5	6	7	8	9	10	11	12	13	14

Metric (mm)	6.5	7	7.5	8	9	10	12	16	19	25
UK	3	2	1	0	00	000				
US	10.5			11	13	15	17	19	35	50
Japanese	15	7		8	9	10				

# Stitch Pattern Files

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Stitch patterns can be added to the design of garment pieces that are created in Original Pattern Drafting or Standard Garment Styling to add interest and color to plain knitting. Stitch patterns are created and amended in Stitch Designer and can be applied to garment pieces in Original Pattern Drafting. Standard Garment Styling garment pieces can be accessed in Stitch Designer in order to apply stitch patterns to them. Patterns can be positioned to fit on the pieces in different ways to suit any desired design.



For the buttons shown here, wherever they appear in DesignaKnit and when they are used to open a file, the "Ctrl" key can be held while clicking them to toggle between opening in Thumbnails and File list view.



Clicking the "Show the integrated stitch patterns" button from the Top Toolbar of Original Pattern Drafting displays all stitch patterns that have been applied to any of the pieces on the workspace. Different stitch patterns can be applied to each garment piece by using this button or the *View / Stitch Pattern* menu option, after which they can be integrated, changed or removed by using the *File / Integrate* option on the menu. Double clicking this button will open the Thumbnails dialog in order to select a (different) stitch pattern for the current piece.

Original Pattern Drafting is not available in the Machine Standard product level of DesignaKnit.



Clicking either of these buttons on the Top Toolbar of Stitch Designer displays the pieces of the selected shape file on the currently active stitch pattern. Shape file pieces can be selected and matched to a stitch pattern. Saving the shape file with the *Shapes / Save Shape (As)* menu option will update the garment piece(s) with this information. The *Shapes / Integrate* menu option can be used to check which pieces are integrated with the current stitch pattern.

"Stitch Pattern" refers to the stitch pattern files found in DesignaKnit, as well as to creating a stitch pattern using stitch texture techniques (slip, tuck, garter stitch, stitch cable, lace, weave) and / or colored yarns. The stitch pattern (*.stp) files are located in the "..\Documents \DesignaKnit 9 \Stitch patterns" folder as a default location, although different folders may be created ([See on page 185](#)) and set as default, using the *File / Default Folder* menu option.

Stitch patterns can comprise colors, textures or both, depending on the method of knitting. Fair Isle stitch patterns can include sections of texture as well as sections of color pattern, but if patterns have a Jacquard method they cannot include textures because Jacquard involves multiple passes of the carriage for each pair of knitted rows, which does not allow for textured knitting. Stitch texture refers to the way in which DesignaKnit works yarns, independent of colors used. More information on techniques and possibilities can be found in *Stitch Pattern Methods* ([See page 130](#)).

When designing stitch patterns, certain rules need to be observed. Not all combinations of knitting machine,

method of knitting and stitch pattern are possible. If there are incompatibilities, DesignaKnit will generate error or warning messages on saving, downloading or using Interactive Knitting. The necessary requirements have been described in the relevant sections, but some general rules to bear in mind are listed below:

- Fair Isle can be worked with two colors per row only.
- Fair Isle patterns can have an odd number of rows and DesignaKnit will warn of difficult color changes if these are encountered.
- Although Fair Isle patterns can contain Smart Symbols, if both color and texture are used in the same row, the texture symbols will take precedence and the color pattern will be ignored.
- Jacquard stitch patterns should not contain Smart Symbols, as they cannot be knitted or downloaded. A warning to this effect is given if the Jacquard pattern contains smart symbols and they will be ignored.
- Jacquard stitch patterns need to have an even number of rows.
- Right / Wrong side facing texture stitch patterns can have only one opaque color in each row.

## Thumbnails

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 In Interactive Knitting stitch pattern files are accessed by clicking on the button on the Left Toolbar (shown here) or the "Browse Stitch Patterns" button that appears on the opening dialog. *.stp, *.pat and *.dat can all be selected here.

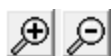
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cases there is a "Use for all pattern pieces" option at the bottom of the thumbnails screen ([See page 211](#)). *.stp, *.pat and *.dat files can be selected.

All the relevant files are shown in the different sections of DesignaKnit as located in the default folder of the stitch pattern files that is set in Stitch Designer. If stitch patterns are located in a different folder this can of course be navigated to. Or if the name of the pattern is known it can be typed in the box. When the first letter is typed the right hand window will respond by jumping to files starting with that letter.

When clicking on the little drop down arrow next to Stitch Patterns (see red oval) the file types that are relevant to the current section of DesignaKnit are shown.

When a stitch pattern is clicked on once, its enlarged image will be displayed in the preview space on the left, as is the case with the 'rosy.stp' pattern shown here. The knitting method (such as F, 2, 3, I, W or Hk, Hg, Hk O etc.) as well as the stitch pattern name are shown underneath the enlarged image. Clicking once on the required file and then on the "OK" button or the enlarged image opens the stitch pattern. Alternatively, the required file can be opened immediately by double clicking on its thumbnail in the right hand side window.



The Zoom options can be clicked on to enlarge or reduce the view of the images. When the zoom level is at maximum, individual points can be seen on the pieces of Original Pattern Drafting pieces.

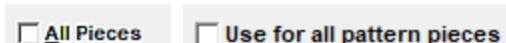


If the spectacles button (see light blue arrow) becomes active, it means a high resolution preview of a large image is available and the button can be clicked on to display it. If the button is grayed out the preview already shows the highest possible resolution.

The "**View All**" button (see fuchsia arrow) only becomes available after "Search" has been used and some options have been excluded from the view, e.g., if only Hand Knitting methods were chosen. Clicking "View All" will display all the files in the folder.

When the "**Details**" box is ticked the image details as well as the image itself are shown (see red circle). The date is the date the image was last saved. Unticked, the images are only shown with their file names.

The size of (in this case) 24 x 64 means that the pattern measures 24 stitches by 64 rows. The numbers 3, 4, 5 or letters I, F, Hk, Hp etc. refer to the knitting method used, which can be changed in *Options / Method of Knitting* at any time during the design. If "CC" is displayed after the knitting method in the title bar of Stitch Designer this denotes that the stitch pattern was saved with the Colour Changer option set to "on".

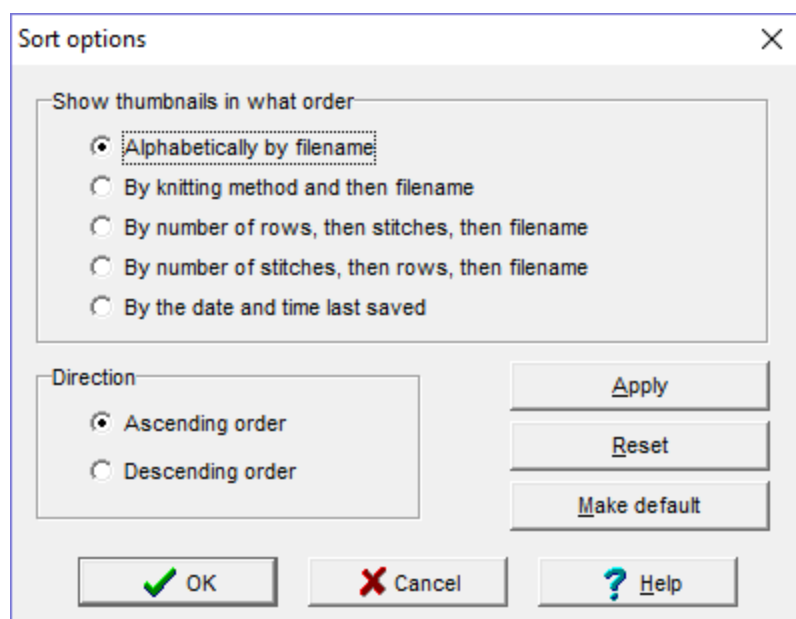


In Original Pattern Drafting an additional box can appear to the right of the "Help" button (see dark blue arrow) on selecting a stitch pattern for a garment piece. It can be ticked if this particular stitch pattern needs to be applied to all the pieces in the shape file. This box shows "All Pieces" or "Use for all pattern pieces" depending on the size of the DesignaKnit program window and may disappear from view altogether if there is not enough space to display it.

The name ("rosy.stp"), as well as the knitting method identifier will be shown in the title bar of the active file, as shown in the image below. For a hand knitted design, the section where the knitting machine is shown will read [ Hand knitting ] and "3" will instead read "Hk" or similar.

Original Pattern Drafting - toddlerdufflejacketgirl.shp (Body) **rosy.stp-3** T:22x32 [ Silver Reed SK840,550,560,580 ]

## Sort



Sort

The "Sort" option at the bottom of the dialog can be used to limit the collection of stitch patterns or palette files that are shown on the screen in a variety of ways.

Once a sort order has been selected clicking "OK" will apply it and exit this box, while "Apply" leaves the "Sort options" box on the screen, allowing different sorting.

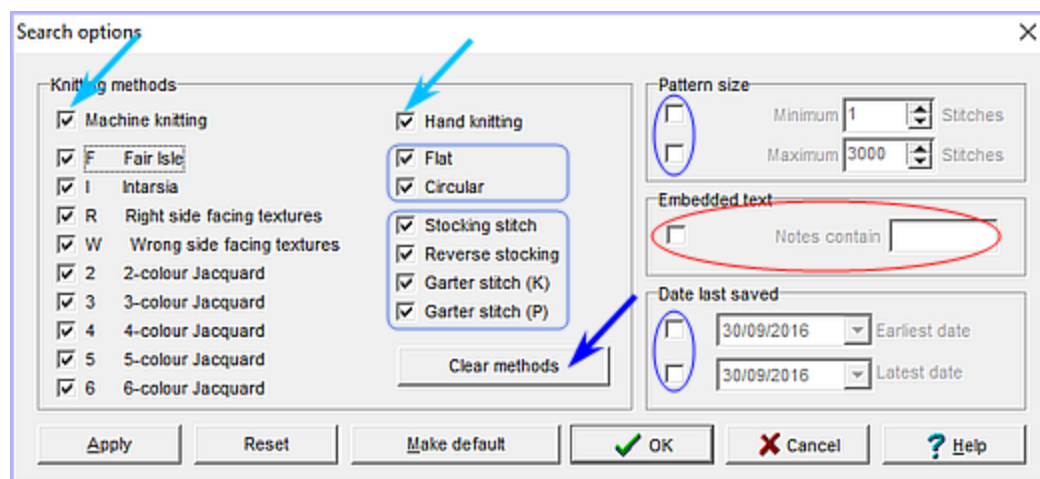
The options chosen can be made default by clicking "Make default" to be used the next time this menu is opened, or "Reset" to revert to the DesignaKnit default settings.

When the default sort of "Alphabetically by file name" is active, and the "Details" option is ticked in the "Open Stitch Pattern" dialog, Hand Knit stitch patterns will be shown using

the same Knitting method code as displayed in the Stitch Designer title bar, such as Hk, Hp, Hgk, or Hgp. If they are Circular, a letter O is added to the code. The same code is shown under the enlarged image of the pattern in main Thumbnails dialog when the pattern is clicked on.

## Search

The Stitch pattern "Search" option allows the number of patterns shown in the Thumbnails view to be limited to required options. The dialog shown below is presented on selecting the "Search" option for stitch pattern and palette files.



Initially all the "Knitting methods" options are ticked to display all available stitch patterns. The "Clear methods" button (see blue arrow) can be clicked to clear all of the options, after which individually chosen stitch pattern characteristics may be chosen.

The "Machine knitting" or "Hand knitting" options (see light blue arrows)

can be ticked or unticked to limit the display to stitch patterns with hand or machine knitting method. As soon as one of the options is selected the corresponding 'header' button of "Machine knitting" or "Hand knitting" is ticked as well. If "Machine knit" is unticked while "Hand knit" was unticked "Hand knit" will be ticked with all of its options, and vice versa.

At least one of the options in each of the hand knitting methods (see light blue boxes) needs to be ticked.

In addition to the Knitting methods "Pattern size" can be specified by entering a minimum and / or maximum number of stitches and "Date last saved" can be specified to limit the search to patterns saved within a date range. The relevant box(es) in front of each option (see blue ovals) needs to be ticked, after which values can be typed in. This is a particularly useful feature if larger or smaller patterns are required, if the number of needles of a knitting machine is limited, or to find stitch patterns with a width to match a particular punch card size.

The search can be limited even further by ticking the "Embedded text" box (see red oval) and entering (partial) text that was entered in the *Edit / Notes* menu option of Stitch Designer. The text is not case sensitive.

Clicking "OK" will apply the search options and exit this box, while "Apply" leaves the Search option dialog on the screen, allowing different criteria to be specified. The options chosen can be made default by clicking "Make default" to be used the next time this menu is opened, or "Reset" to revert to the DesignaKnit default settings.


 A rectangular button with a light gray background and the text "Make default" in blue.

The "Make default" option can be very useful when searching for certain stitch patterns if not all the information is known. Rather than having to input the search criteria every time a file is opened and found not to be the required one, the default setting will keep repeating the same search until the correct file is found. The "Reset" and "Make default" buttons need to be clicked to revert to the DesignaKnit default search criteria.

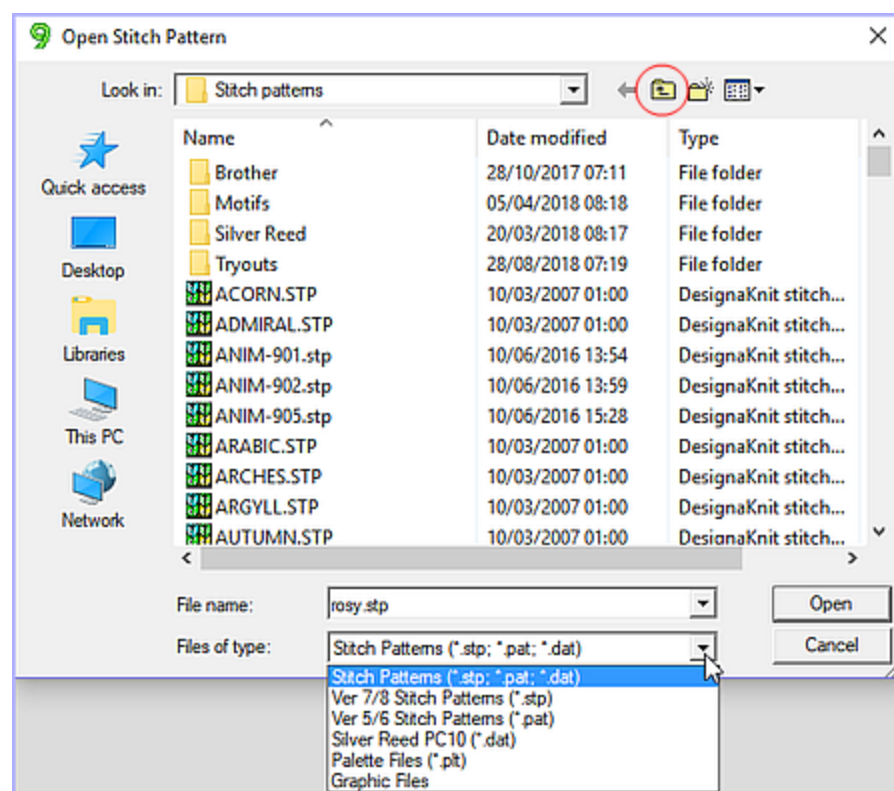

 A rectangular button with a light gray background and the text "Search" in red.

When a search has been applied, the "Search" button in the "Open Stitch pattern" dialog turns red to remind the user that search criteria apply.



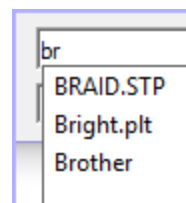
Stitch patterns cannot be resized in Original Pattern Drafting. If the size is not as required the *.stp file needs to be modified in the Stitch Designer part of the program.

## Open File



Using the *File / Open Stitch Pattern* menu option in Stitch Designer presents a dialog as shown on the left, in which the files are simply listed as in any Windows application. This view can also be accessed by using "Ctrl-O"

The dialog can list stitch pattern (*.stp, *.pat, *.dat), palette (*.plt) and graphic files with their name and last amended date. The last opened file is shown in "File name". Which file types are listed can be specified by clicking on the little drop down box arrow of "Files of type" (see cursor arrow).



When starting to type letters in "File name" the program responds by displaying the matching records and limiting the

selection in the drop down box to the name, ignoring any file types that might have been selected previously. In this example three different file types were offered by typing "br" in the "File name" box. When the required file is visible it can be chosen by clicking on it and then clicking "Open".

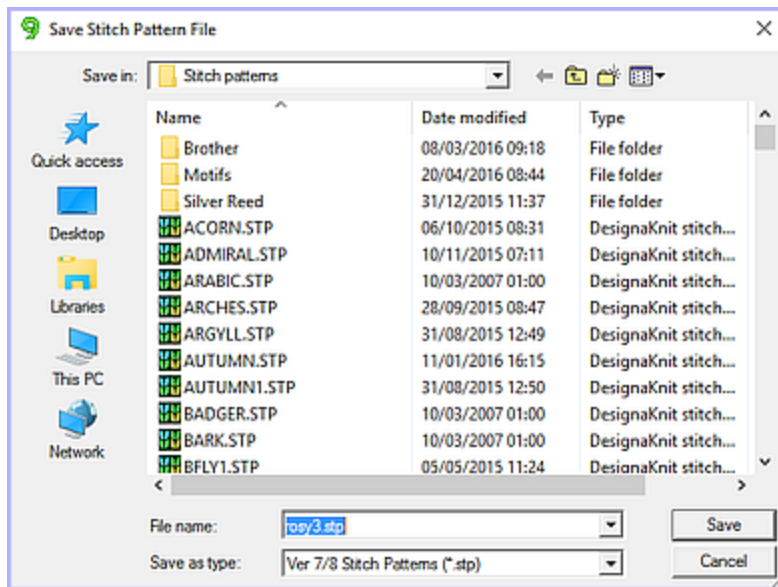
Palette and graphic files are described in more detail in the Stitch Designer manual.

If the file is in a different location this can be navigated to by using the Windows button (see red circle at the top) to move through the folders ([See also Folders and Paths on page 185](#)).

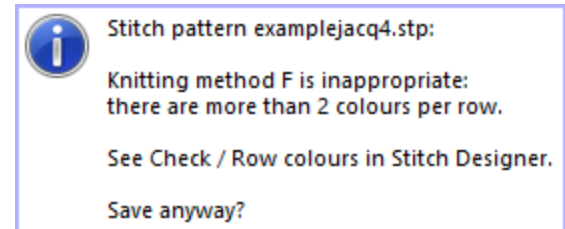
## Save



Stitch patterns and palette files can be saved at any point in the process and DesignaKnit presents different options depending on when "Save" is opted for. If a stitch pattern file already exists the "Save" button, or using "Ctrl-S" will save the open file without further prompting and the pattern is left on the screen for further manipulation.

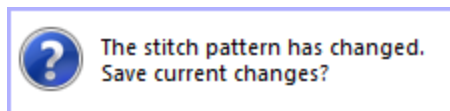


If it is the first time the pattern is saved, using *File / Save* or "Ctrl-S" presents the "Save As" dialog as shown on the left, in which the stitch pattern needs to be given a name and location. The default DesignaKnit stitch patterns location is presented, but may be changed if necessary.



If there are errors in the file, DesignaKnit may present a warning such as shown above and offer to save anyway. This can be useful if the file is to be worked on at a different point in

time.

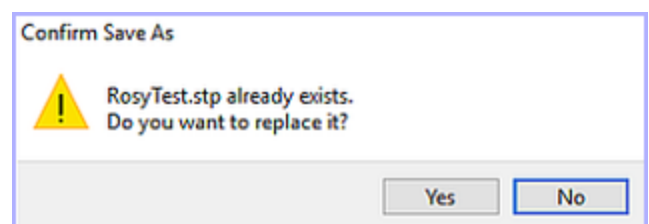


If unsaved changes have taken place in the pattern, and another file is switched to from the *File* menu, or a different section of DesignaKnit is accessed the program presents the warning shown on the left.

If "Yes" is clicked the "Save Stitch Pattern File" dialog is presented in the same way as in a normal "Save As" action, except that the current file name is already filled in.

If the file name is changed and saved it will be accepted as such unless it already exists, in which case DesignaKnit will present another dialog, asking whether the existing file is to be overwritten.

Clicking "Yes" will overwrite it. If "No" is clicked, the file can be renamed and saved.



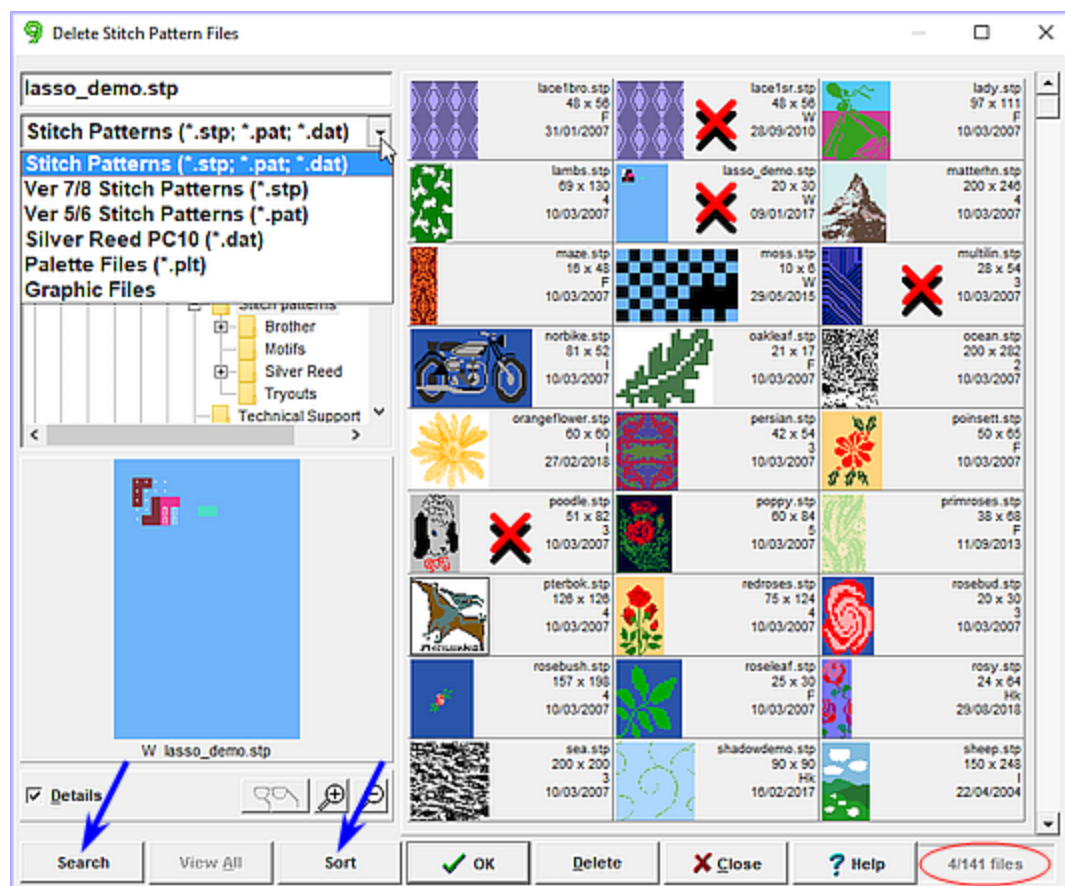
Stitch pattern files can be saved as different type of files by selecting one of the options in the drop down box of the "Save Stitch Pattern File" dialog, as shown on the left.

*.stp and *.pat are normal stitch patterns for the current and previous versions of DesignaKnit respectively, while *.dat will save the stitch pattern in a format

that can be used with the Silver Reed PC10 (See on page 265). Saving as *.plt file will save only the palette of the current stitch pattern, so that it can be used with different stitch patterns in the future.

If the method of knitting is changed and the stitch pattern saved, it is saved for all instances in which it is used, so that all pieces in all shape files that contain that particular stitch pattern will be changed. Saving is generally an action in itself, but if the method is changed in Interactive Knitting it is changed and saved without any prompting.

## Delete



Using the menu option *File / Delete* will open the thumbnails view of the Stitch patterns folder. The types of file that can be displayed are stitch patterns (*.stp, *.pat, *.dat), palette files (*.plt) and graphic files (any image files). Limiting the display to any of these types is done by clicking the down arrow at the side of the drop down box (see cursor arrow) and selecting one of the types.

When clicking on a thumbnail a red cross appears over the image. Clicking on the thumbnail again removes the cross. In this way all files to be

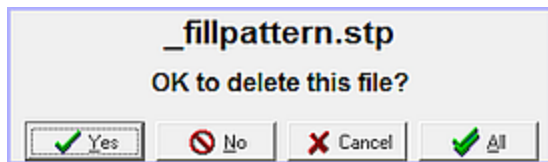
deleted can be selected and when the "Delete" button is clicked all the selected files can be removed either one by one or the entire selection at once.

There is a running count of files to be deleted at the bottom of the dialog (see red oval).

Files can be sorted ([See on page 212](#)) and searched ([See on page 212](#)) to facilitate selection (see blue arrows).

If none of the files are selected, clicking the "Close" button will return to the workspace with the current file displayed. Clicking "OK" will return the user to the workspace without further prompting. Any files that were marked for deletion will not be deleted.

If the stitch pattern that is open on the workspace is marked for deletion and deleted, it will still be on the workspace when this is returned to, but its name will be changed to "Untitled.stp", enabling saving or abandoning.



If files are selected and either the "Close" or "Delete" button is clicked, the program will display the dialog shown on the left with the name of one of the files that is marked, asking whether it is "OK to delete this file?". If the "Close" option was used the files will be deleted as instructed and the user is returned to the workspace. If "Delete" was chosen the Thumbnails view of DesignaKnit remains open after deleting the selected files so that further selections can be made.

The program will ask for each file that is marked for deletion and the options "Yes", "No", "Cancel" and "All" are given. "Yes" deletes one file at a time, "All" deletes all selected files without further prompting, "No" skips the file and asks the same for the next if more than one has been selected, "Cancel" cancels the operation and returns to the "Delete shape files" screen, leaving options as they were chosen.

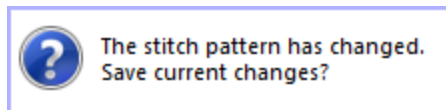
After deleting the necessary files this part of the program can be exited by either clicking the "Close" button or pressing the Esc key on the keyboard.



Deleting files cannot be undone. When files are deleted from DesignaKnit they do not end up in the Windows recycle bin but are removed completely.

## Integrate

The *File / Integrate* menu option in Original Pattern Drafting and *Shapes / Integrate* menu option in Stitch Designer both allow a stitch pattern and garment piece to be integrated with or detached from each other. In Original Pattern Drafting a stitch pattern is applied to a shape, while in Stitch Designer a shape is applied to a stitch pattern.



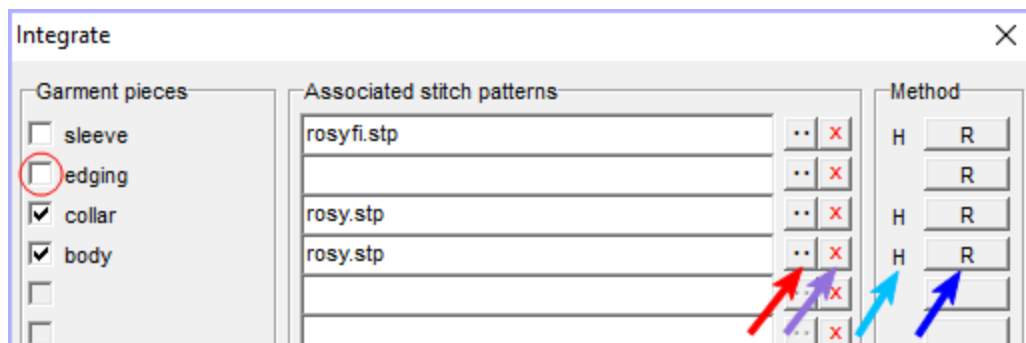
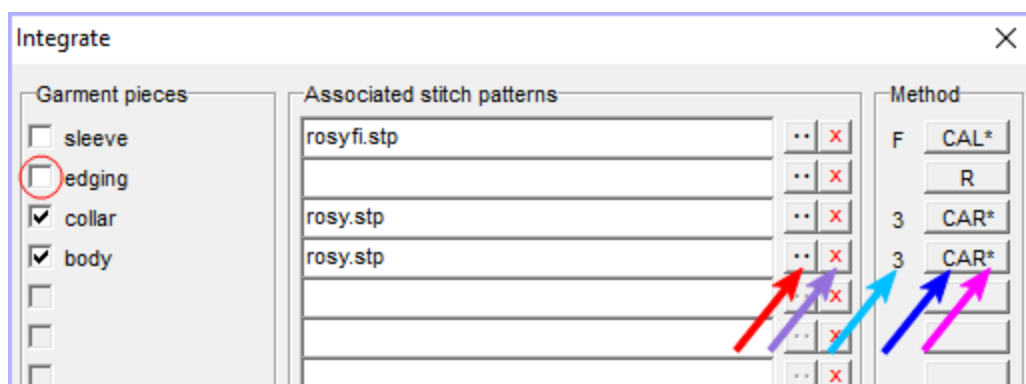
The "Integrate" dialog can only be accessed in Stitch Designer after the current stitch pattern is saved. If changes are made prior to accessing *Shapes / Integrate*, the message shown on the left is presented with the options "Yes", "No" and "Cancel". Changes include changing the method

of knitting and switching the Colour Changer on or off, as well as the normal amendments with the design tools. If "Yes" is clicked, the program proceeds to the "Integrate" dialog, while clicking "No" or "Cancel" will return to the workspace without integrating stitch pattern and shape file piece. If the changes were not intended, they can be undone by clicking the Undo button on the Left Toolbar, accessing the *Edit / Undo* menu option or using "Ctrl-Z".

A shape file may already be open, possibly because Stitch Designer was accessed from Original Pattern Drafting or Standard Garment Styling. If this is the case, any garment pieces that have been integrated with the current stitch pattern will be ticked in the *Shapes / Integrate* dialog and will be opened on the workspace after clicking "OK".

The dialog on the right is shown on accessing the *Integrate* option in Stitch Designer.

Ticking a blank box in front of a garment piece in Stitch Designer will integrate the currently open stitch pattern with that garment piece. If a stitch pattern other than the currently open one is integrated (for example by integrating different stitch patterns in Original Pattern Drafting) its name will be shown, but the selection box will be blank. Ticking a blank box will associate the open stitch pattern and unticking it will leave the field empty or reapply the previously shown stitch pattern. Applying the current stitch pattern in this way will not affect the Original Pattern Drafting integration until the shape is saved with this new pattern in the *Shape / Save Shape (As)* menu, at which point a different shape file name can be given.



Unticking a ticked box will either unintegrate the currently open stitch pattern or reapply the stitch pattern that was previously applied. In the example on the right, ticking the blank box in front of the "sleeve" piece will integrate "rosy.stp". Unticking the same box will reinstate "rosyfi.stp". Unticking the "body" piece will unintegrate the current stitch pattern and leave the field blank.

Unticking a "Garment piece" (see red circle) will dissociate the stitch pattern from this particular piece and will show it as a Shape-only on returning to the Original Pattern Drafting workspace, while the shape outline will no longer be shown over the currently open stitch pattern in Stitch Designer.

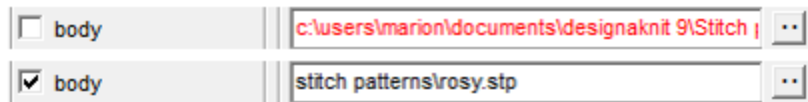
The Original Pattern Drafting "Integrate" dialog does not contain the red "x" buttons to unintegrate stitch patterns as this can be done by ticking and unticking the Garment pieces. All garment pieces are listed and ticked if stitch patterns have been integrated. Unlike Stitch Designer, all pieces with stitch patterns are ticked. Where no stitch pattern has been selected the entries will be blank, as shown for the "edging" piece of this shape file.

Ticking a blank box in front of a garment piece in Original Pattern Drafting will either reapply the just previously unticked stitch pattern, as long as the dialog has not been closed by clicking "OK", or it will present the thumbnails view of stitch patterns ([See page 209](#)) from which one can be selected.

## TIP!

If an unintegrate action was unintended in Original Pattern Drafting, the previous situation can be returned to by opening the same file from the most recent list in the *File* menu, and choosing not to save the current changes.

 Alternatively, clicking the red "x" (see purple arrows) in the Stitch Designer "Integrate" dialog will unintegrate any stitch pattern that was integrated. Care should be taken if it is used for a stitch pattern other than the current one as the integration is lost. If this was not intended, selecting "Cancel" or ticking and unticking the box in front of the garment piece will reinstate the previous integration.



If a stitch pattern that was integrated has been deleted or renamed its original name and path will be shown in red in the "Integrate" dialog while the garment piece box will be unticked. The path and name can be

removed by ticking Garment piece box, which will open the Thumbnails dialog to select another stitch pattern, clicking "Cancel" if one is not needed at this point, then "OK" in the "Integrate" dialog, which will remove the stitch pattern name from the DesignaKnit records. Restoring or renaming the stitch pattern to its original name will rectify the situation unless a different stitch pattern has been selected and saved with the garment piece. A different stitch pattern may be chosen by clicking the selection button to the right of the stitch pattern name.

Shape-only options will be applied if a stitch pattern is removed by using the red "x" or unticking the Garment piece box. The stitch outline (i.e., the use of double row steps in gentle slopes) may change, depending on whether the starting position was set differently for the piece with or without a stitch pattern. If a piece is integrated but *View / Stitch Pattern* is turned off in Original Pattern Drafting, making it appear like a Shape-only piece on the workspace, the stitch outline will still be calculated according to the stitch pattern.

If a garment piece is integrated with a stitch pattern but the Shape-only option is selected in Interactive Knitting, the stitch outline uses the start direction that is selected in the Shape-only options instead of the option as it was set in the stitch pattern.



A (different) stitch pattern can be chosen by clicking on the selection button (see red arrows) which will open the thumbnails view of stitch patterns.

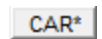
The light blue arrows in the images above point to the method of knitting ([See page 206](#)) that was chosen for that stitch pattern, which is a machine knitting method in the top and hand knitting in the bottom image. This is informational only and cannot be changed here.



Whether a garment piece is knitted from the Left or Right side for hand knitting is determined by the method chosen in *Options / Method of Knitting* ([See page 113](#)) and cannot be changed in this dialog, as indicated by the grayed out option (see darker blue arrow in the bottom image).



The darker blue arrow in the bottom image indicates the starting position of the knitting machine carriage. The default setting is CAR (Carriage on Right), but this can be changed to CAL (Carriage on Left) by clicking on the Carriage position button for each piece. For pieces without integrated stitch patterns (Shape-only), the default starting position displays only "L" or "R" and this can also be changed by clicking the button.



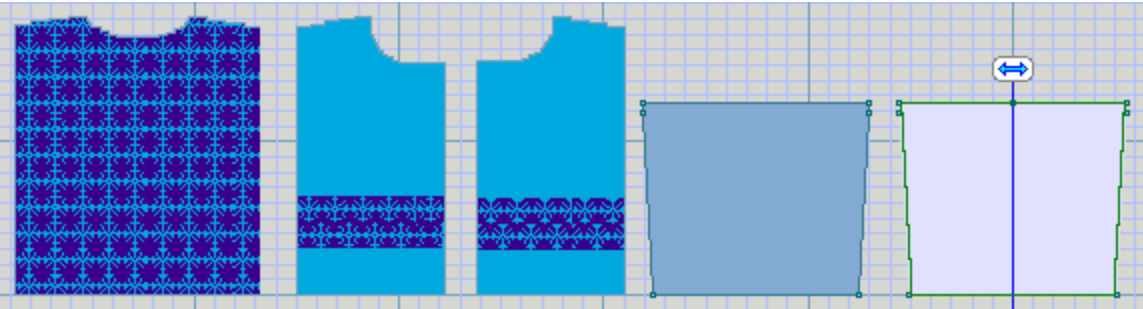
An asterisk appears next to the starting position of the carriage if the Colour Changer has been configured 'on' (see pink arrow). Clicking on the method

button while the "*" is shown will result in the message shown here, and the Colour Changer can be switched off by clicking "Yes". Thereafter its position will be toggled between Right and Left on clicking the button. If the Colour Changer is required it will have to be ticked in *Options / Method of Knitting* as usual.

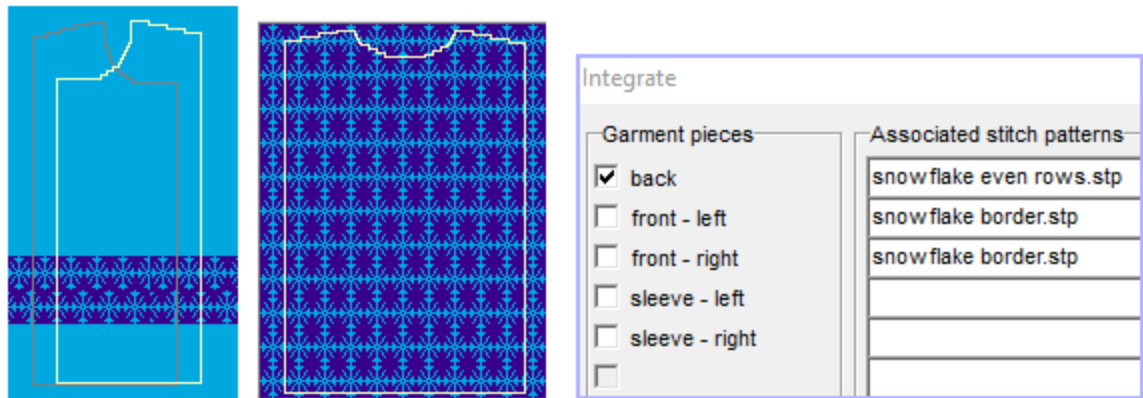


The starting direction cannot be changed while the colour changer is configured on. Turn off use of the colour changer?

Integrated garment pieces look different on the Original Pattern Drafting and Stitch Designer workspace, as shown below for a baby cardigan of which several pieces have been integrated with different stitch patterns.



The Original Pattern Drafting workspace, on which all the pieces of the shape file can be laid out as shown above. In this example, back, front pieces and sleeves have all been displayed together, showing the different stitch patterns they have been integrated with.



The same shape file has been shown in Stitch Designer. The pieces and their respective stitch patterns are shown here, together with the "Integrate" dialog, detailing that a different stitch pattern has been applied to back and front pieces, while the sleeves are not integrated. The images of the front and back pieces cannot be shown together on the Stitch Designer workspace, as only one stitch pattern can be worked with and thus displayed.

The easiest way to view the entire garment is in Original Pattern Drafting where all the pieces can be seen integrated with different stitch patterns. If Original Pattern Drafting is not present, as for the Machine Standard product level, the pieces have to be viewed in Stitch Designer.

Stitch patterns can be laid out across two or more pieces of a garment in Stitch Designer, where the garment pieces can be positioned on top of the stitch pattern instead of the other way around.

## Transfer

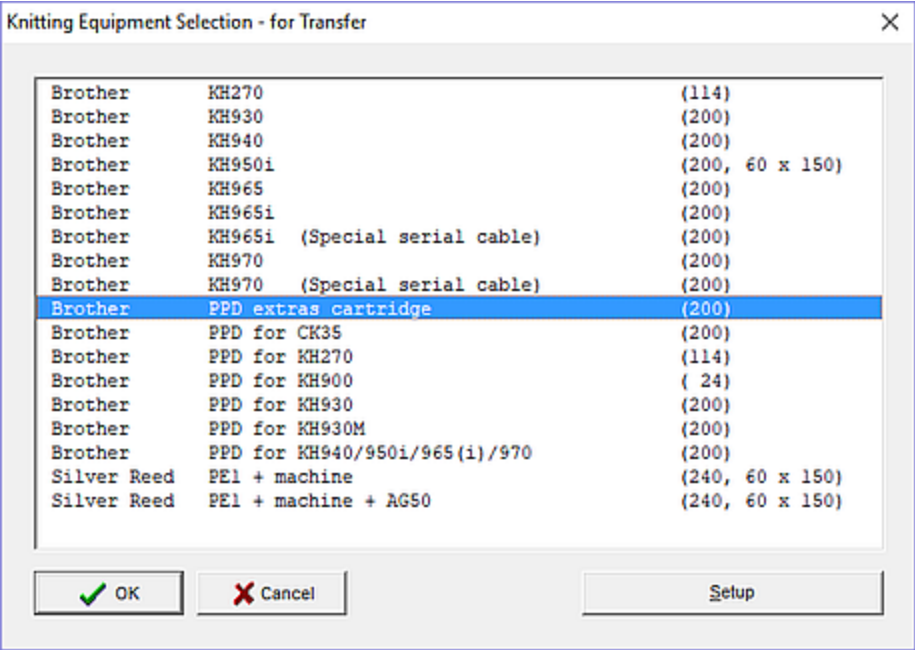
Upload .....	221
Extract .....	223
Restore .....	226
Download .....	228

Integrated Download .....234

The Transfer Menu in Stitch Designer contains functions for transferring information to and from the knitting machine, using the appropriate cable link. Information about the different cable links can be found in Specific Cable Links (See page 278). Not all cable links can handle downloading or uploading of stitch patterns, but for those that do the menu options are described below.

The "Extract" and "Restore" options only apply to Brother stitch patterns, knitting machines and PPDs.

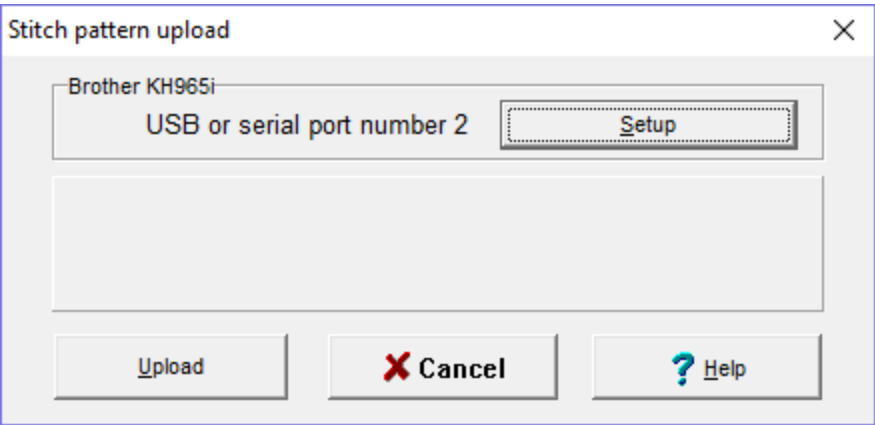
Upload



Stitch patterns can be uploaded to DesignaKnit from a Brother electronic knitting machine, a Brother PPD (Pattern Programming Device) or a Silver Reed PE1 Design Controller, as listed in the image on the left.

On selecting *Transfer / Upload* the "Knitting Equipment Selection" dialog is opened, from which the correct equipment can be selected. Selecting a different machine from the one currently selected through *Options / Method of Knitting* will change it for the DesignaKnit session upon returning to the workspace.

Clicking the "Setup" button allows different options to be selected for the selected knitting machine (See on page 121).



After clicking "OK" on the "Knitting Equipment Selection" dialog, the "Stitch pattern upload" screen is presented, from which the "Setup" button only allows a different cable link to be chosen and / or the appropriate USB or serial port number to be established by clicking the "Find Link" button (See page 277).

Clicking "Upload" will continue the upload process, and "Cancel" will return to the workspace. While uploading an "Uploading" message will

be displayed.

When a Jacquard pattern or a pattern that is created with the Lace tool is downloaded to the knitting machine memory, DesignaKnit separates the colors beforehand. If that same pattern is subsequently uploaded, there is no way for DesignaKnit to know how to put the separated colors back together.

Depending on the selected knitting machine, the dialogs that are presented after the knitting equipment is selected can be different, as shown in their sections below.

## Brother electronic knitting machine or PPD

Brother knitting machines contain their own built in stitch patterns, and also have a facility for user patterns (the 900 series). The built in Brother stitch patterns are located in the knitting machine memory and cannot be uploaded or downloaded directly. Copies of them are located in the Brother folder within stitch patterns and can be used in DesignaKnit to create designs. Any built in stitch pattern that is used or amended can be saved, placing a copy in the stitch patterns folder that can be downloaded as a 900 series user pattern in the normal way.

*Transfer / Upload* will copy the 900 series patterns to the DesignaKnit stitch pattern folder, where they will be saved with a .bro file extension. The upload count that is displayed on the screen refers to the data in kilobytes and not to the number of patterns that is transferred. Before they can be used, uploaded stitch patterns need to be extracted, using *Transfer / Extract* ([See on the next page](#)), after which each pattern can be named and saved.

Before downloading any stitch patterns to the Brother KH930, KH940, KH950i or PPD, it is good practice to upload the existing patterns to DesignaKnit as downloading will overwrite all existing 900 series stitch patterns, even if only a single pattern is transferred.

**On the CB-1, select DATA TRANSFER**

**then SAVE DATA TO DISK.**

Turn the PPD on.

On the PPD, select page number (1-32) and press Step.

Then select OK.

**Turn PPD on & select OK.**

**Uploading...**

When the "Upload" button is clicked after selecting the knitting machine and establishing the cable link connection, messages and instructions will be displayed inside the "Stitch pattern upload" dialog. Examples are given on the left.

The "Enter number" message may be displayed if the PPD for KH900, KH930, KH930M or the 'Extras' cartridge has been selected and the upload is divided over different PPD pages ([See page 252](#)). After entering the page number, Upload will proceed and an "Uploading" message will be displayed.

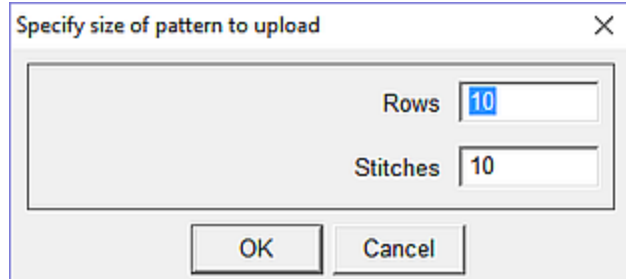
The Extras cartridge is a separate cartridge that contains read only Brother stitch patterns. These can be uploaded to DesignaKnit, worked on and subsequently saved as user patterns, but the contents of the cartridge cannot be overwritten by downloads.

## Silver Reed

Stitch patterns can be uploaded, one at a time, from the Silver Reed PE1 unit by using the SilverLink 3 cable link. With the correct pattern in the memory of the PE1, *Transfer / Upload* can be chosen. The stitch pattern is placed on the DesignaKnit workspace and can be saved for future use by choosing *File / Save As* and placing it in the appropriate folder.

Patterns from Mylar sheets can be uploaded into DesignaKnit by first reading them into the PE1 memory, then using the *Transfer / Upload* menu option.

After selecting the knitting equipment and clicking "OK" on the "Knitting Equipment Selection", the "Stitch pattern upload" screen is presented, from which the "Setup" button can be accessed to check the cable link connection or choose a different one ([See page 277](#)).



Clicking on "Upload" presents the "Specify size of pattern to upload" box into which the size of the pattern to be uploaded needs to be entered in stitches and rows. While initially the values are "0", whatever is typed in here is remembered for future sessions of DesignaKnit.

**Turn on EC1 (or 500 series knitting machine).**

On the PE1, load the required pattern, key KNIT and "=".

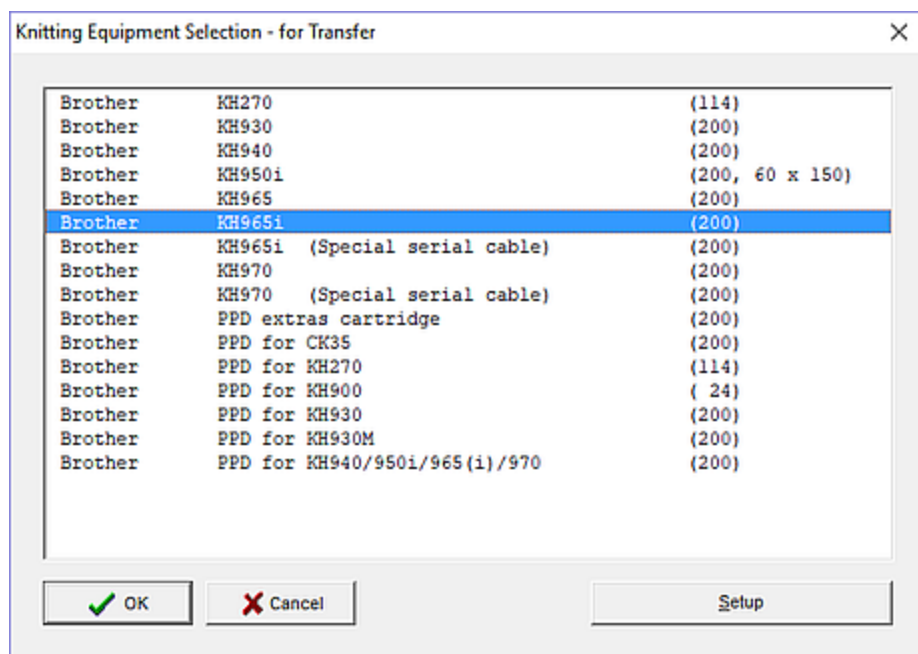
After clicking "OK" the message shown on the left is displayed within the "Stitch pattern upload" dialog and upload will proceed as soon as the instructions are carried out.

During uploading an "Uploading" message will be displayed.

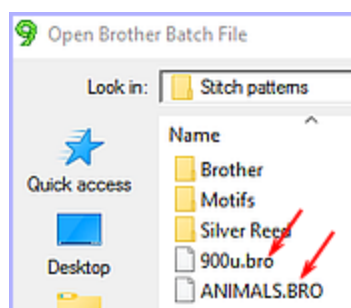
## Extract

Previously uploaded stitch patterns need to be extracted and saved before they can be used in DesignaKnit, as their format is otherwise not compatible.

The Extract process is applicable only to Brother 900 series stitch patterns that were uploaded from the knitting machine.

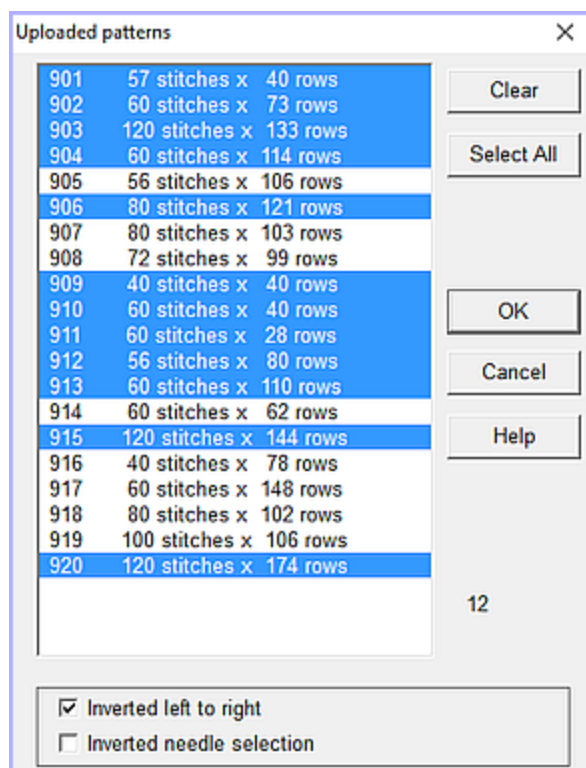


The *Transfer / Extract* menu option in Stitch Designer opens the "Knitting Equipment Selection" dialog shown on the left, in which the correct knitting machine or PPD needs to be chosen. Selecting a different machine from the one currently selected through *Options / Method of Knitting* will change it for the DesignaKnit session upon returning to the workspace.



After "OK" is clicked the "Open Brother Batch File" dialog will open. Any files that were uploaded will be located here and can be chosen from the list of names with a .bro extension (see red arrows).

Once *Transfer / Extract* has been used, the files that were selected are displayed at the bottom of the *Transfer* menu and can be chosen from there. The knitting equipment that was last chosen will be highlighted for every file that is chosen and needs to be checked and changed if necessary.

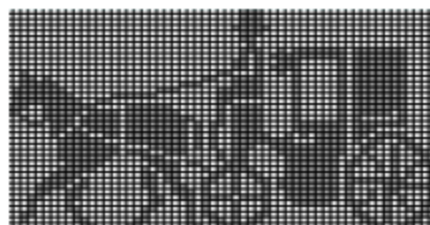


Each .bro file can contain one or more stitch patterns to be extracted, which is evident after the file has been selected and "OK" has been clicked. The file shown here contains 20 different stitch patterns.

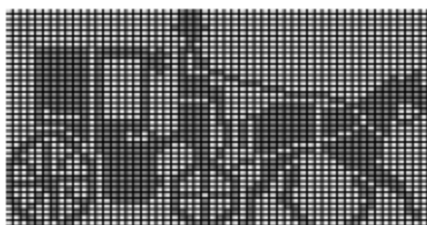
The "Uploaded patterns" list displays all the available patterns in number order, starting with 901. For each pattern the number of stitches and rows is given, making it easier to find a pattern of a particular size.

The stitch patterns to be extracted may be selected by clicking the "Select All" button, which will highlight all of them, or they may be chosen individually by clicking on each pattern in turn. Holding the "Ctrl" key while clicking will add each file to the selection, or holding down "Shift" will select all the files between the first and last one chosen.

A count is kept of the number of highlighted files, which in this example is 12. Clicking the "Clear" button will deselect all files.

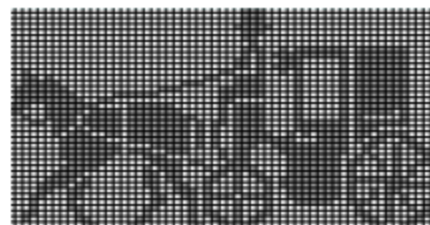


Not inverted

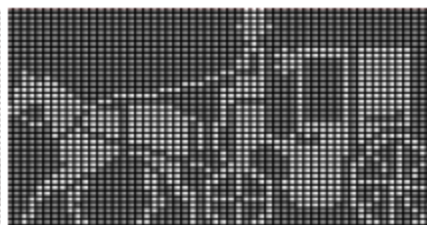


Inverted left to right

The **"Inverted left to right"** button can be ticked to reverse the stitch pattern, which has the effect as shown on the left.



Not inverted



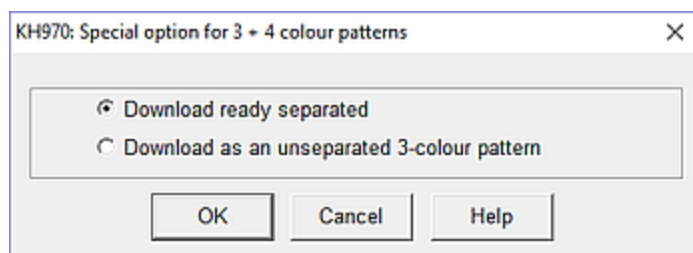
Inverted needle selection

The **"Inverted needle selection"** button can be ticked to swap over the selected and deselected needles, resulting in the colors being swapped, as illustrated on the left.

A combination can be made of Inverting left to right and needle selection. However, this will not work for some stitch pattern types, as described

below.

**Brother KH970** - When extracting uploaded 900 series patterns which were originally downloaded as unseparated 3 or 4 color patterns (see below), the "Inverted needle selection" option is ignored. Patterns that were originally downloaded as Fair Isle, unseparated 2 color patterns and 3 or more color Jacquard patterns which have been separated by DesignaKnit will carry out the "Inverted needle selection" instruction.



Jacquard patterns which were separated by DesignaKnit in the download process ("Download ready separated" in the "Special option" box) will be shown in their separated format when they are uploaded and cannot be viewed as a complete color pattern. However, 3 and 4 color Jacquard patterns downloaded to the KH970 for separation by the knitting machine ("Download as an unseparated 3-color pattern" in the "Special option" box) will upload as complete patterns.

This option appears only in the KH970 download process if 3 or 4 color patterns are selected.

When "OK" is clicked in the "Uploaded patterns" dialog with one or more files highlighted, the first of these will open in the DesignaKnit workspace, together with a "Save As" dialog (named: "Give Name for Uploaded Pattern No. n") in which the name of the stitch pattern can be altered and a different location chosen. DesignaKnit offers a default name, consisting of the first four letters of the batch name, followed by a "-" and a number, starting from 901. The default location is the stitch patterns folder (C:\Users \username \Documents \DesignaKnit 9 \Stitch patterns), but this can be changed in *File / Default folder*. These options can be accepted as they are or changed and then accepted by clicking the "Save" button.

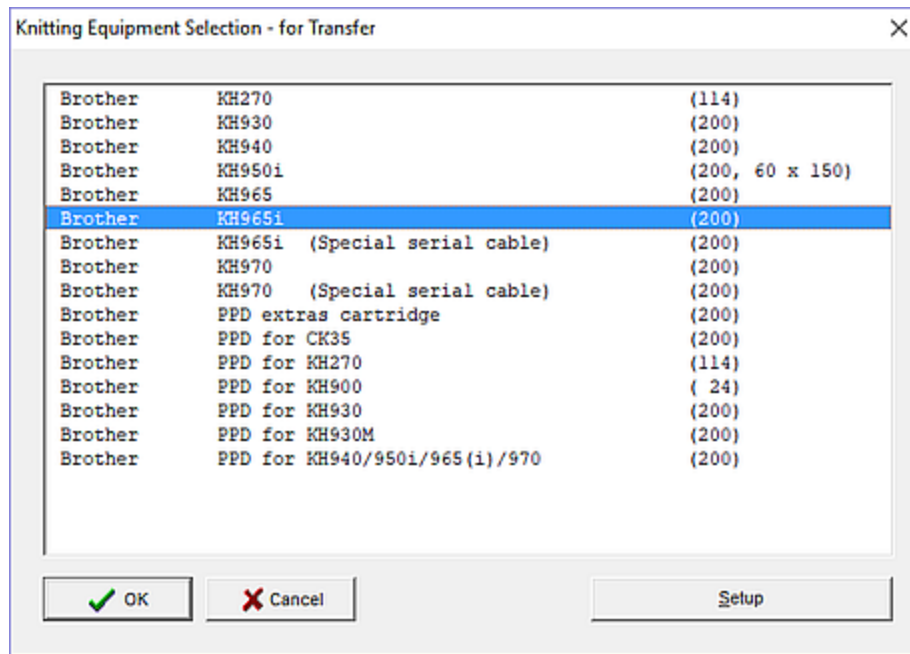
If more than one stitch pattern was selected the next pattern will open on the workspace, and the "Save As" dialog is presented again with the same choices, offering the same name for the file with a sequential number, exactly as they are numbered in the "Uploaded patterns" list. In this way all files of a batch can quickly be saved to the correct location.

Any existing Memo information (Memo numbers and Yarn symbols) will be uploaded with the pattern. However, as a knitting machine can only recognize yarns being different, but cannot differentiate which specific colors are used, the extracted pattern will display only the relevant number of colors and not in any particular color scheme. It will use the colors that are in the current palette.

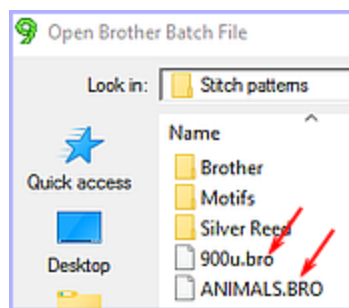
Memo numbers and Yarn Symbols can be viewed in the *View* menu, and altered in the *Palettes* menu of Stitch Designer.

## Restore

The *Transfer / Restore* menu option is used to restore a previously uploaded batch of stitch patterns to a Brother electronic knitting machine or PPD, with the exception of the PPD in KH900 mode.

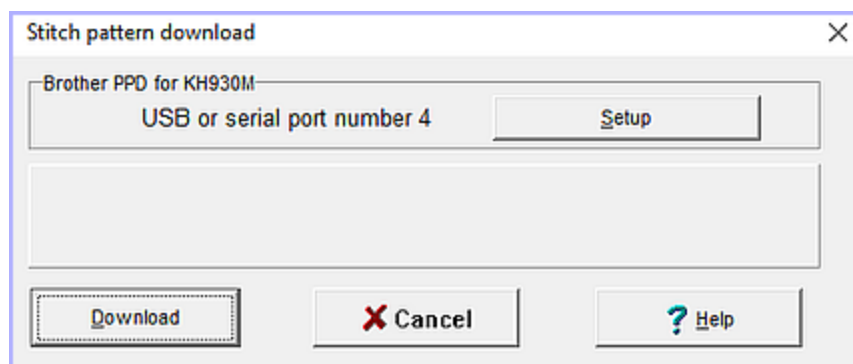


*Transfer / Restore* first of all opens the "Knitting Equipment Selection" dialog shown on the left, in which the correct knitting machine or PPD needs to be chosen. Selecting a different machine from the one currently selected through *Options / Method of Knitting* will change it for the DesignaKnit session upon returning to the workspace.

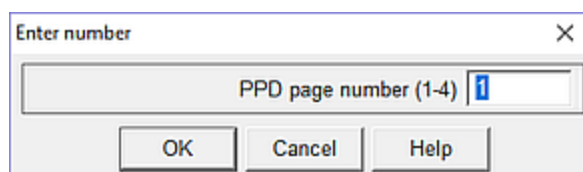


After "OK" is clicked the "Open Brother Batch File" dialog will open. Any files that were uploaded will be located here and can be chosen from the list of names with a .bro extension (see red arrows).

After selecting the desired file, the "Stitch pattern download" dialog will open from where "Setup" may be clicked to check or change the cable link ([See page 277](#)).



Clicking "OK" continues the restore process, "Cancel" returns to the workspace.



An "Enter number" box may be displayed if the PPD for KH900, KH930, KH930M has been selected and the upload is divided over different PPD pages ([See page 252](#)).

Memory of PPD page will be 1% full.

Turn PPD on & select OK.

After entering the required page number, Restore will proceed and a message such as shown on the left will appear in the "Stitch pattern download" dialog.



Whereas *Transfer / Download* uses stitch pattern files (with a .stp extension), *Transfer / Restore* uses Brother batch files (with a .bro extension).

When batch files are uploaded from a Brother knitting machine or PPD to DesignaKnit, they are given a name and saved with a .bro extension. These saved batches or the single stitch patterns that they contain can be restored back to the knitting machine. This allows the user to assemble and keep batches of related stitch patterns on the computer and put them back in the knitting machine memory whenever needed. This can be very useful, especially for batches of integrated patterns. E.g., if a stitch pattern is designed for a specific garment and all of the garment pieces have been integrated with it, the batch as a whole can be restored to (re)knit the garment.

Having once assembled a batch of stitch patterns and downloaded to the knitting machine, it can subsequently be uploaded to the computer in its entirety, where it can be given a meaningful name. It is then safely stored on the computer, ready to be downloaded or restored whenever needed.

Although *Transfer / Restore* can be used to transfer batches of patterns from one machine to another of the same type, it cannot be used to transfer to a fundamentally different knitting machine. If this is needed, the batch must first be uploaded to DesignaKnit from the original knitting machine, the patterns extracted, after which they can be downloaded to the second knitting machine.

If an attempt was made to restore a batch of stitch patterns to a different type of knitting machine from the one where it originated, the memory will be corrupt and an 888 procedure (see knitting machine manual) will need to be carried out to clear it.

*Transfer / Restore* replaces all patterns that are in the knitting machine's memory for the KH270, KH930, KH940, KH950i, and PPD, even if only one pattern is restored.

The same procedure adds patterns to the memory of the KH965, KH965i and KH970 one by one and *Transfer / Restore* needs to be repeated for each pattern to be restored. For these machines it can be a good idea to clear the memory of the knitting machine before restoring patterns to it, to prevent the memory getting too full.

The KH270 and KH965 can use the serial BrotherLink 4 cable link if it is available (it is no longer manufactured because the chips are unavailable) to restore the stitch patterns directly to the knitting machine's memory. For the KH270, the entire batch of patterns is restored to its memory and all stitch patterns in the restored batch will keep the original numbers that were assigned to them when they were first uploaded. For the KH965 a batch of patterns can be downloaded to the serial BrotherLink 4 cable link, but only one pattern at a time can be transferred into the memory of the KH965. If the serial BrotherLink 4 is not available, a BrotherLink 3 can be used to transfer the patterns to a PPD.

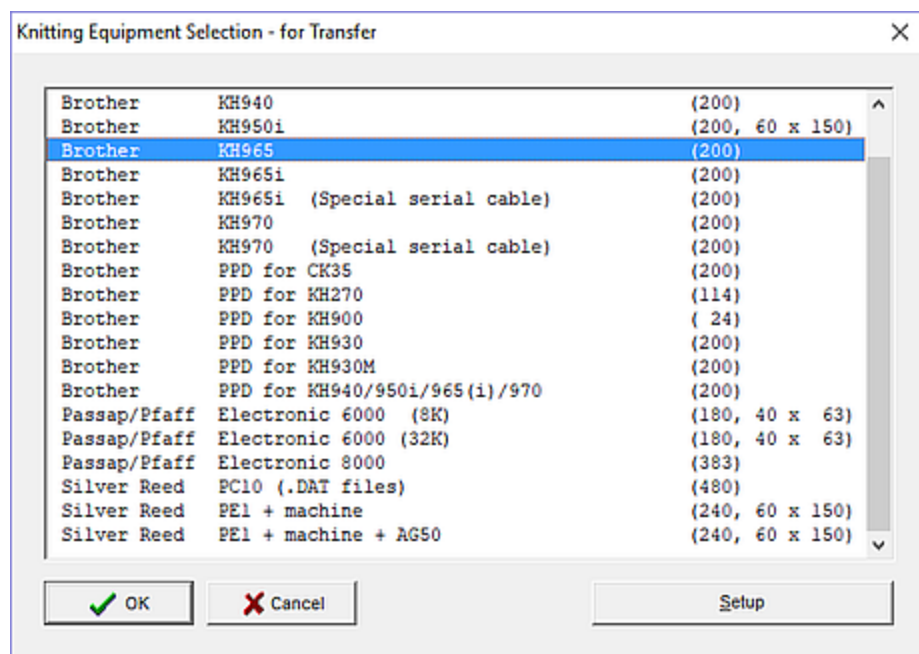
## Download

The *Transfer / Download* menu option in Stitch Designer is used to download stitch patterns to Brother electronic machines and PPD, Silver Reed PE1 and PC10 pattern devices and the Passap consoles.

The appropriate knitting method must be allocated to the stitch pattern(s) as it will affect the download. I.e., a Jacquard or Lace pattern will be separated into multiple carriage passes before downloading (except for the Brother KH970 ([See page 257](#)), for which there can be a choice).

Before starting to download or set up a batch of patterns for download it is important, especially for Fair Isle patterns, to check that the correct colors have been marked for selecting or deselecting needles.

DesignaKnit only downloads saved files. If the download process is started and the file on the workspace is not saved at that time, the program will prompt to save it. If the latest version is needed, then clicking "Yes" will ensure this happens. If "No" is clicked, DesignaKnit will continue with the version of the stitch pattern that was last saved.

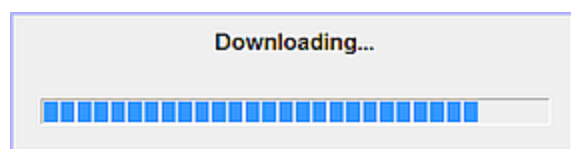


On selecting *Transfer / Download* the "Knitting Equipment Selection" dialog as shown on the left is opened, from which the correct knitting machine can be selected. Selecting a machine that is different from the one currently selected will change it for the DesignaKnit session upon returning to the stitch pattern.

Changing the knitting equipment sets it for all parts of DesignaKnit, not just the individual stitch pattern.

Unless it is known that the setup (knitting machine, cable link and port number) is correct, the "Setup" button should be clicked from which the "Find Link" button ([See page 277](#)) should be clicked in order to find the correct port number to establish communication between computer and knitting machine.

Depending on the selected knitting machine, the dialogs that are presented after the knitting equipment is selected can be very different, as shown in their sections below.

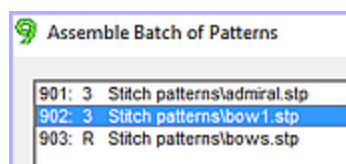


When the "Knitting Equipment Selection" screen is returned to, "OK" can be clicked and downloading can proceed, which displays a download progress bar, as shown on the left, in the "Stitch pattern download" dialog.

## Brother

Before starting to knit a downloaded pattern, the knitting machine must be programmed with the number that has been allocated to the downloaded pattern in its memory. At that point it is the knitting machine's console and the carriage settings, not the computer, that dictate how the needles are selected.

Either a single pattern or a batch of patterns can be downloaded in one operation to all Brother electronic knitting machines and PPD modes, with the exception of the KH965i and KH970 which will only accept patterns one at a time.



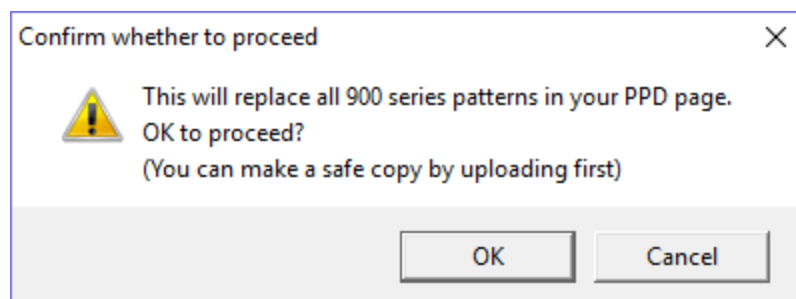
After the setup options have been selected and "OK" is clicked on the "Knitting Equipment Selection" dialog, the next dialog, depending on the knitting machine, allows selection of stitch patterns to assemble a batch, as shown on the left.

If a single pattern is too big to fit in a single memory page, DesignaKnit will ask which section is to be downloaded ([See on page 252](#)).

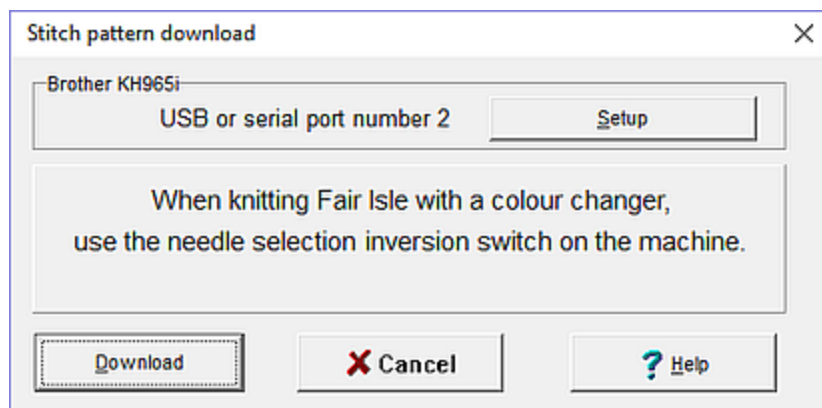
Although DesignaKnit maintains the list of files when a batch is downloaded, it can be useful to print a copy of it for future reference in case this list is changed, as the pattern number that is on the list will be the one allocated by DesignaKnit. Keeping a record can be done by clicking on the "Copy All" button that appears on the "Assemble Batch of Patterns" dialog, and pasting the result into a word processor to be saved and printed if necessary ([See page 255](#)).

Where download takes place to a knitting machine with its own memory or a PPD, the warning shown on the right may be displayed after selecting the patterns.

Clicking "OK" overwrites, while clicking "Cancel" returns to the workspace to allow the user to Upload the existing patterns first ([See on page 221](#)).



Downloading or restoring to the KH270, KH930, KH940, KH950i or PPD will erase all the 900 series patterns that are in the memory, even if only one stitch pattern is downloaded. Downloading or restoring to the KH965, KH965i and KH970, will add to the 900 series patterns. The knitting machine will offer the next available unused 900 series number for the new pattern.

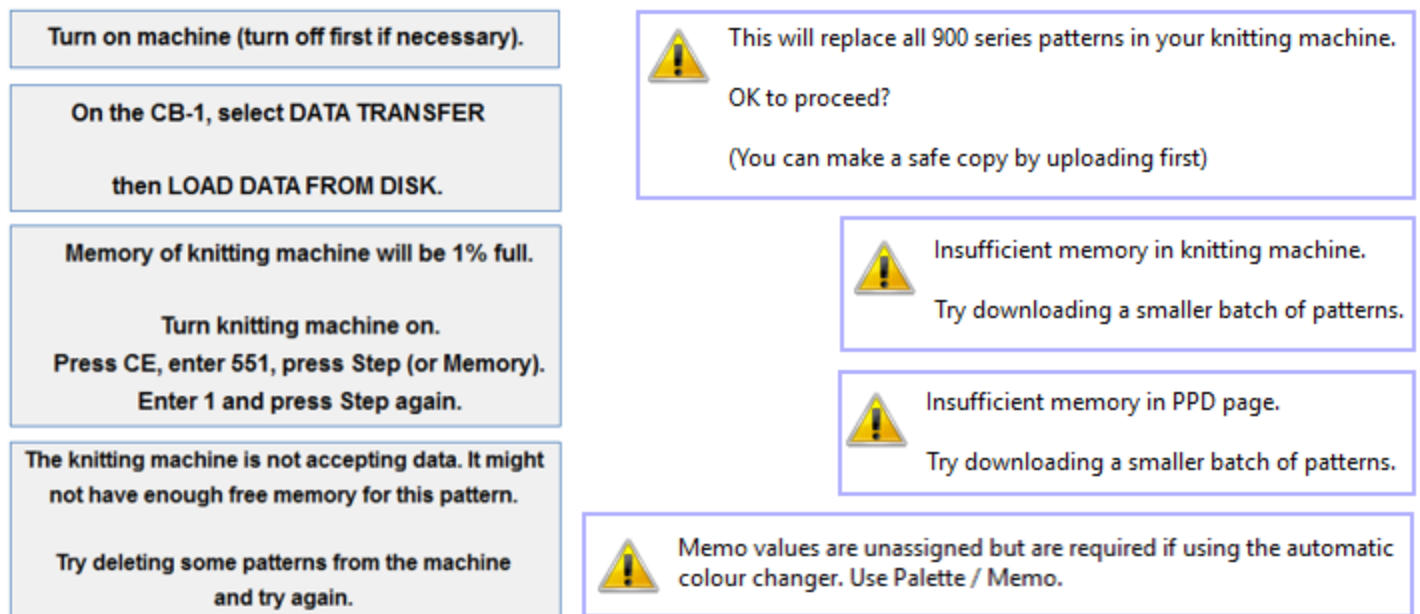


Clicking "OK" on "Assemble Batch of Patterns" or "Knitting Equipment Selection" displays the "Stitch pattern download" dialog.

This may contain additional instructions such as the one shown here, and presents another opportunity to click "Setup" in order to use "Find Link" ([See page 277](#)).

Clicking "Download" will proceed with download, while clicking "Cancel" abandons the process, returning to the workspace. Downloading may, depending

on the selected knitting machine and other circumstances lead to display of further instructions within the "Stitch pattern download" dialog, such as the messages shown in gray on the left hand side of the images below, or further warnings and suggestions in separate messages as shown by the images on the right hand side.



Whatever the status of the Colour Changer in DesignaKnit the pattern itself will be downloaded with the needle selection configured for normal knitting. At knitting time, the 'Negative' button on the knitting machine should be switched on to reverse the needle selection for knitting with the Colour Changer. The Colour Changer option should concurrently be switched on in Interactive Knitting to generate the correct yarn changing instructions.

It is not possible to download to the PPD if the Stitch Pattern Extras cartridge is installed ([See page 258](#)).

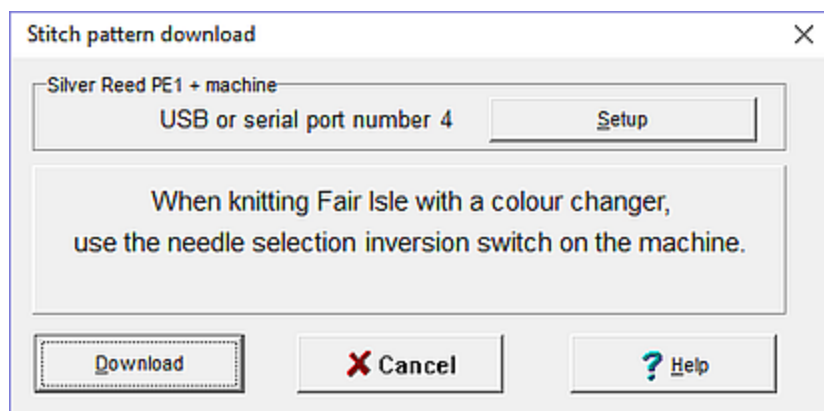
## Silver Reed

Patterns can only be downloaded to the PE1, one at a time ([See on page 266](#)).

The PE1 can accept Jacquard color patterns with a maximum of 5 colors per row. Colour separation methods A to D and F can be defined in *Options / Method of Knitting* by going to the "Setup" menu and selecting "Jacquard", according to preference.

Method B is preferable if a highly detailed color pattern needs to be downloaded. The *Check* menu option in Stitch Designer can be used to ensure the colors will separate correctly. Method B results in fewer errors than other methods, therefore fewer corrections will be necessary and more fine detail is preserved. The *Stitch Designer View / Yarn Numbers & Feeders* menu option can be used to rearrange the yarn order if necessary.

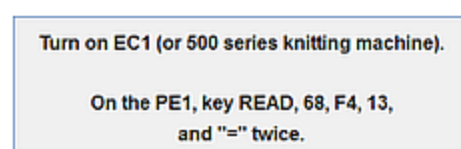
If Memo information (See *Palettes / Memo* in Stitch Designer) needs to be transferred to the PE1, method D may be preferable. In the stitch pattern, numbers 1 to 7 can be assigned to the colors that are used in the design. The PE1 will not recognize numbers 8 and 9. If method D is used, the screen instructions for downloading are slightly different and include pressing the "F3" key on the PE1 to indicate Jacquard knitting.



Clicking "OK" on the "Knitting Equipment Selection" dialog, after the options have been set correctly displays the "Stitch pattern download" dialog, as shown on the left.

Clicking on "Setup" presents another opportunity to use "Find Link" in order to change the port number if necessary ([See page 277](#)).

Clicking "Download" will continue the download process and "Cancel" will return to the workspace.

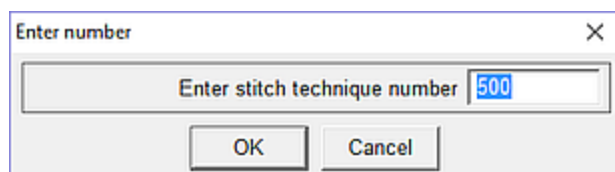


Clicking the "Download" button will commence downloading, displaying instructions, such as shown here, within the "Stitch pattern download" dialog as necessary, while clicking "Cancel" will abandon the process, returning to the workspace. During download, a "Downloading" message will appear.

Patterns for the PC10 are saved in a specific format and instead of transferring them via a cable link, they are saved or copied from the computer onto an SD card which can be read by the PC10 Pattern Controller. The *Transfer / Download* menu option creates a folder on the SD card which can thereafter be used to save stitch patterns to in the specific *.dat format ([See on page 265](#)).

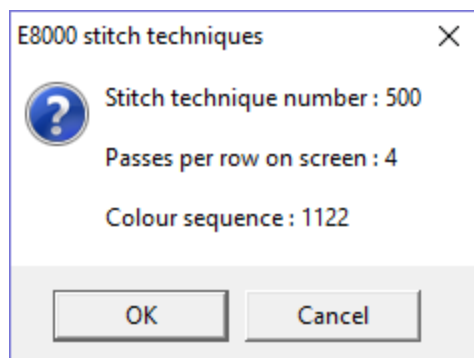
## Passap

Patterns need to be open in Stitch Designer to be downloaded, one at a time, to Passap knitting machines.



Using the *Transfer / Download* menu option and selecting a Passap knitting machine first of all presents the "Enter number" dialog shown on the left, where the correct technique number needs to be entered ([See on page 260](#)).

The number entered here needs to match the number entered on the knitting machine console.



On typing the correct number and clicking "OK" a box appears with information about the stitch technique, as shown on the left.

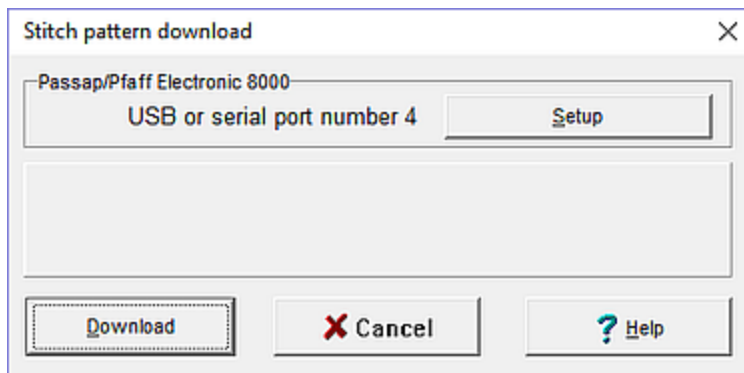


One or more memo values are unassigned. Please use Palette / Memo.

If there is an error in the pattern, DesignaKnit will display an error message such as the one shown above. This message states that not all the colors used in the pattern have a Memo number, which is a prerequisite for downloading. Clicking "OK" returns to the stitch pattern where the necessary adjustments can be made before accessing the

download option again.

When all goes well, DesignaKnit continues and displays the following "Stitch pattern download" dialog, where "Setup" may be clicked to check or change the port number of the cable link ([See page 277](#)). Clicking "Download" will continue the download process and "Cancel" will return to the workspace.



"Download" needs to be clicked to proceed with downloading the stitch pattern, after which a message such as the following will be displayed within the "Stitch pattern download" dialog.

**Connect up the DesignaKnit E8000 Link,  
and turn on the Console power.**

Program the Console until it shows:  
"ON THE PC, SELECT KNIT A PATTERN"  
and select OK

The instructions need to be followed to program the knitting machine console, which will now prompt for a technique number.

This should be identical to the number used in DesignaKnit, as otherwise the knitting instructions, and therefore the knitted result will not make sense.

It is the Passap Technique number and not the computer (DesignaKnit pattern) which controls the sequence of color changes and needle selection for the actual knitting.

**Press the large ENT  
key on the Console**

When the console has been programmed, clicking "OK" on the DesignaKnit "Stitch pattern download" screen will display the message shown here and knitting can commence. During download, a "Downloading" message will appear. The download process has been described in more detail for the E8000 ([See page 263](#)).

The method of Jacquard separation that has been selected for the pattern in the Jacquard section of the knitting machine setup, through *Options / Method of Knitting* is not used for downloading to the Passap machine or for Interactive Knitting. This information is only used for template printouts ("Stitch Pat template") that are accessed through the *File / Print* menu option in Stitch Designer.

Suppression of blank rows is never used when downloading to or using Interactive Knitting for the Passap. DesignaKnit will work out the feeder positions for the yarns and the template printout will show the result. This can also be seen in the *View / Yarn Numbers & Feeders* menu option.

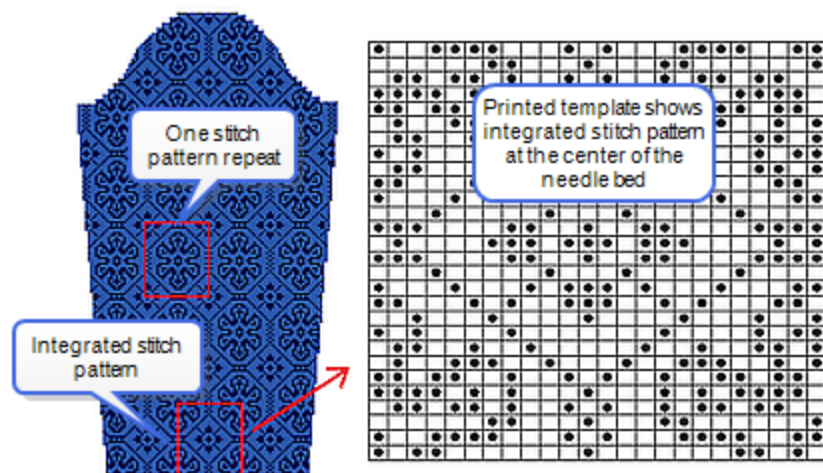
Downloading to the Passap E6000 machine is only possible if it has the correct chip ([See page 261](#)).

The memory of the E6000 is not large, therefore it may be good practice to clear it at the console with the "ERASE" procedure before downloading new patterns, so that the maximum amount of memory is available. For more information about the memory of the E6000 ([See on page 252](#)).

More information can also be found in Upload & Download ([See page 253](#)).

## Integrated Download

An integrated stitch pattern is a stitch pattern to which a garment piece from a shape file has been applied. More information about integrating shape files with stitch patterns can be found in the "Shapes and Stitch Patterns" chapter of the Stitch Designer manual.



If an unintegrated stitch pattern is downloaded to a knitting machine, DesignaKnit will position the stitch pattern at the center of the needle bed, as it is shown on the Stitch Designer workspace.

If a shape file is integrated with the stitch pattern, the shape piece, rather than the stitch pattern, is at the center of the needle bed and the stitch pattern is shuffled as necessary to be placed onto the shape correctly, as is shown in the image on the left. If punch cards or Mylar sheets are used, the pattern will be

shuffled according to the template and the knitting machine does not need to be programmed. For hand knitting, integrating a shape piece with a stitch pattern means that the symbols, color chart and text instructions will start and end in the correct place for each row.

As the position of the integrated stitch pattern may be different for each piece of the shape file, at the Interactive Knitting stage, a separately adjusted stitch pattern is downloaded for each integrated piece. Interactive Knitting handles one shape file piece at a time, or the stitch pattern itself. The stitch pattern will be shuffled horizontally and vertically by the required number of rows and stitches before being downloaded, so that the knitted piece exactly matches the display on the Stitch Designer or Original Pattern Drafting screen. The downloaded pattern will be at the center of the needle bed and knitting will commence at row one of the downloaded pattern, rather than row one of the stitch pattern on the Stitch Designer screen.

In order to use integrated download, a shape file needs to be integrated with a stitch pattern file. This can be achieved in several ways:

- A shape file can be opened in Standard Garment Styling or Original Pattern Drafting. It is not necessary to have a stitch pattern associated with the shape file at this point. Clicking the Stitch Designer button while a shape file is open in one of these sections opens Stitch Designer. If there is no stitch pattern already active, Stitch Designer will open with the stitch pattern of the active Original Pattern Drafting shape file piece, or one of the other pieces if the active piece has no stitch pattern. A Standard Garment Styling shape file does not have a stitch pattern associated with it, unless this is done in Stitch Designer. If there is a stitch pattern already active in Stitch Designer this will be on its workspace, and the shape file that was open in Standard Garment Styling or Original Pattern Drafting will be associated with it. The stitch pattern that is currently open will be the stitch pattern that will be integrated through *Shapes / Integrate*, regardless of which stitch pattern may or may not have been selected in Original Pattern Drafting. When the shape file is saved through *Shapes / Save Shape File (As)*, these changes will be applied. Reopening the shape file in Original Pattern Drafting will show the newly integrated stitch pattern. With this method, integration of shape file and stitch pattern takes place in Stitch Designer.

- When a shape file is opened in Original Pattern Drafting, stitch patterns can be integrated with one or more pieces, by selecting a stitch pattern (using the appropriate Top Toolbar button), then using the *File / Integrate* menu option to integrate as needed. Integration then takes place in Original Pattern Drafting.
- With a stitch pattern open on the Stitch Designer workspace, a selected shape file can be integrated by using the *Shapes / Integrate* menu option. Integration then takes place in Stitch Designer. Opening and Integrating shape files is also described in the Stitch Designer manual.

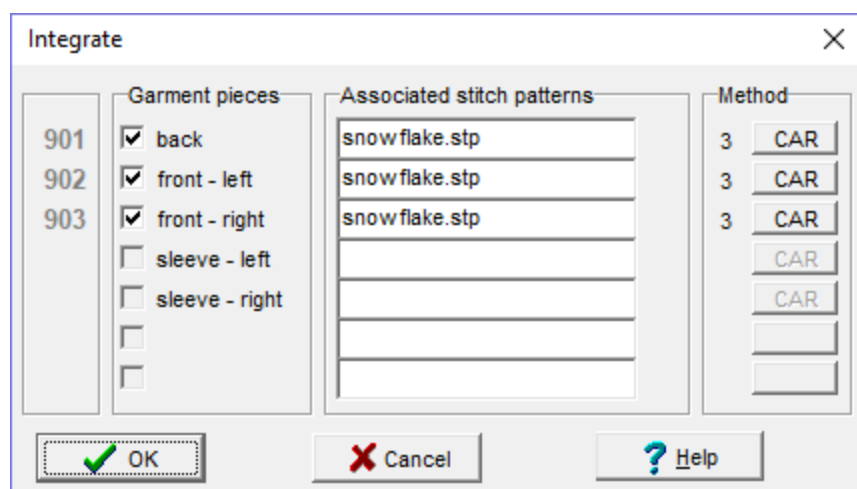
Stitch Designer's *Transfer / Integrated Download* option downloads a version of the stitch pattern for each piece of a shape file. The pattern is automatically shuffled to the left or right so that the piece is at the center of the needle bed, and up or down so that knitting starts on the correct row for the start of the piece.

The stitch pattern is shown with the effect side (right side, outer side) of the fabric facing the user so that the finished result can be seen. If the integrated pattern is subsequently downloaded to a knitting machine, the actual stitch pattern, along with the shaping of the pieces, may be flipped horizontally if necessary. This will be done correctly and automatically by DesignaKnit as long as the appropriate method of knitting has been set for both the stitch pattern and the knitting machine.

For machines and devices which allow a batch download, as many pieces as the memory will accommodate can be downloaded at the same time, but for those which only accept patterns one at a time, each piece must be selected in turn and the process needs to be repeated for each additional shape piece.

The shape itself cannot be transferred to the machine's memory. However, when downloading an integrated stitch pattern, DesignaKnit takes the knitting method into account and will indicate shaping instructions and color changes at the appropriate times in Interactive Knitting. This means that for Jacquard, and patterns drawn with the Lace tool, DesignaKnit will separate the pattern into carriage (lock) passes and ensure that the shaping instructions are shown on the correct rows.

With the stitch pattern open on the Stitch Designer workspace, the necessary piece or pieces can be selected from the correct shape file in the *Shapes* menu. After the integration options have been set as required, *Transfer / Integrated Download* can be accessed, from where the correct knitting machine needs to be chosen. After clicking "OK" a dialog is presented in which the integrated stitch patterns can be selected for download.



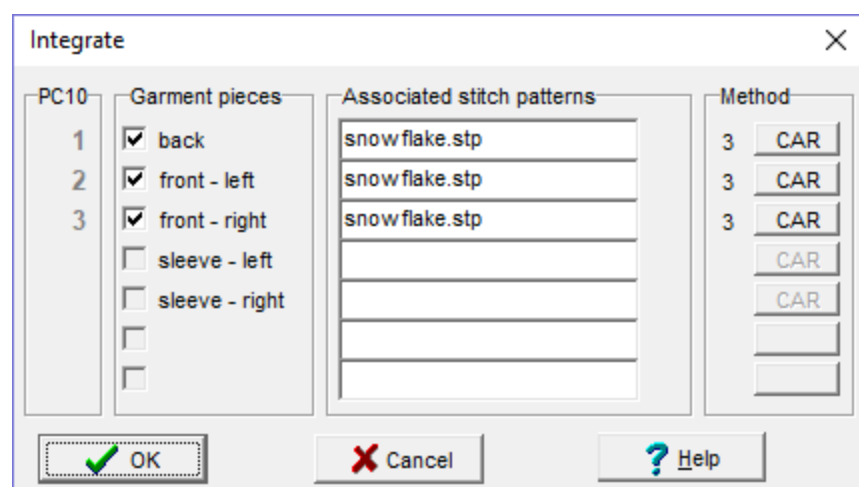
For the Brother KH270, KH930, KH940, KH950i or PPD, all the integrated patterns that need to be downloaded can be ticked or unticked. The stitch patterns will be numbered, starting from "901". If one of the pieces were to be unticked the patterns would be renumbered, so that the batch always starts with 901 and is sequential.

Whether knitting starts and the right or left side of the bed can be selected by clicking on the CAR (Carriage on Right) button, which will then toggle between CAR(Carriage on Right) and CAL

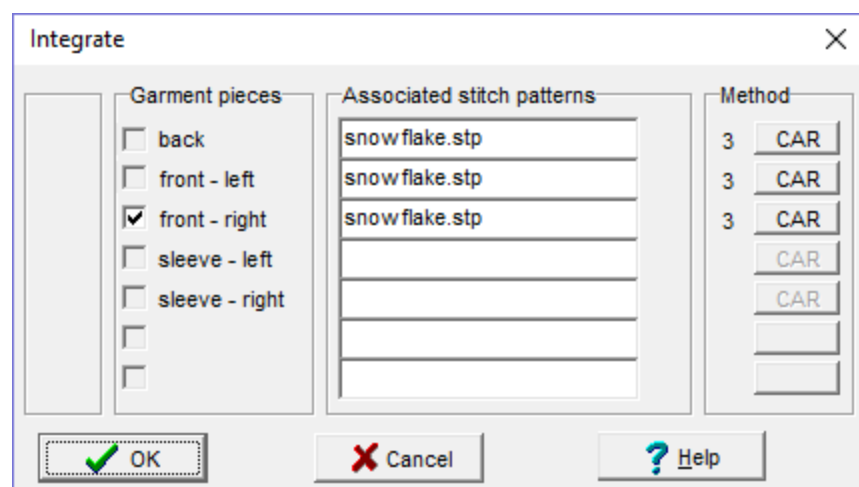
(Carriage on Left).

Provided the knitting machine or PPD has sufficient memory, the patterns for the pieces will be downloaded as a batch, one stitch pattern per shape piece. If not enough memory space is available, DesignaKnit will display an error message, the download will stop and the process will need to be restarted with fewer pieces ticked. If any

single pattern is too large to download in one go, it will be split by DesignaKnit and Interactive Knitting will produce informational messages when the next section is to be downloaded.



For the PC10 the options are the same, except that the patterns are numbered sequentially from "1". They will be saved to the external SD card and can be taken to the knitting machine when required. More information about how to download stitch patterns to the PC10 can be found in PC10 - Pattern Controller ([See page 265](#)).



For the Brother KH965, KH965i, KH970, Passap E6000, E8000, and Silver Reed PE1, only one integrated pattern can be selected for downloading at one time.

DesignaKnit will download the stitch pattern associated with the selected piece. If the stitch pattern is multi colored Jacquard or Lace, and is too large to download in one go, DesignaKnit will split the pattern and produce informational messages in Interactive Knitting when the next section is to be downloaded.

# Shape Files

<b>Thumbnails</b>	<b>237</b>
<b>File Open</b>	<b>242</b>
<b>File Save</b>	<b>242</b>
<b>File Delete</b>	<b>244</b>

Shape files are used in Original Pattern Drafting, Standard Garment Styling, Stitch Designer and Interactive Knitting. How to open, search, sort, save and delete them is described in this chapter, which can also be accessed from the "Work Flow" section of the manual of each separate DesignaKnit section.

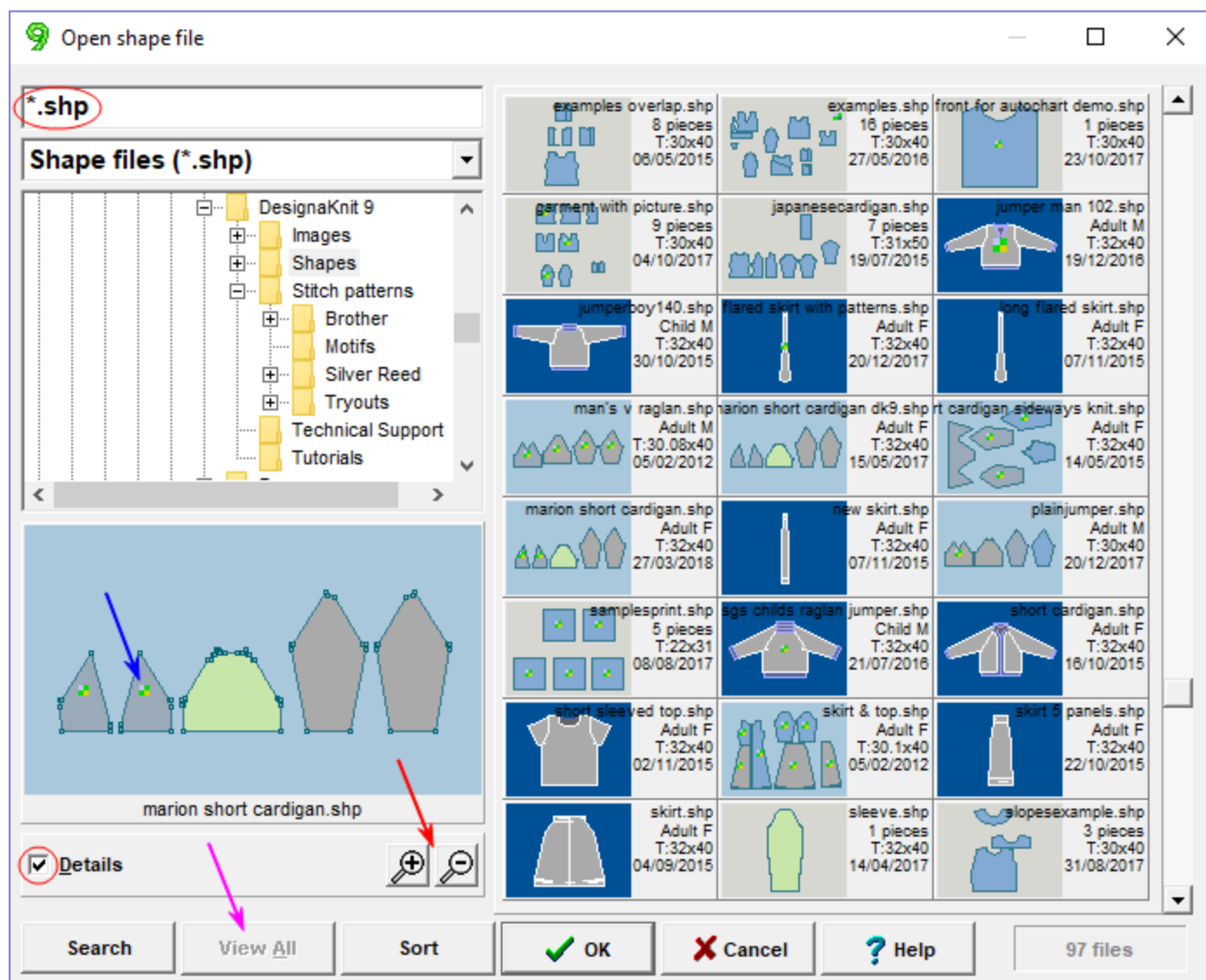
## Thumbnails

<b>Search shape files</b>	<b>240</b>
<b>Sort shape files</b>	<b>241</b>



Thumbnails for shape files are accessed by using the *Shape File / Thumbnails* menu option, clicking the 'Open shape file' button on the Left Toolbar or selecting the "Browse Shape Files" button on its opening screen. The dialog goes directly to the Shapes folder in DesignaKnit, displaying shape files only (*.shp). It offers much more detail than the *File / Open* menu option ([See on page 242](#)) as it contains at a glance views of the contents of each shape file.

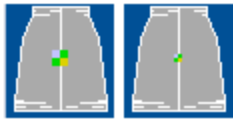
When viewing this manual on the computer, the cursor may be hovered over the image. Where the cursor changes to a hand it can be clicked on as a quick way of getting to the relevant section.



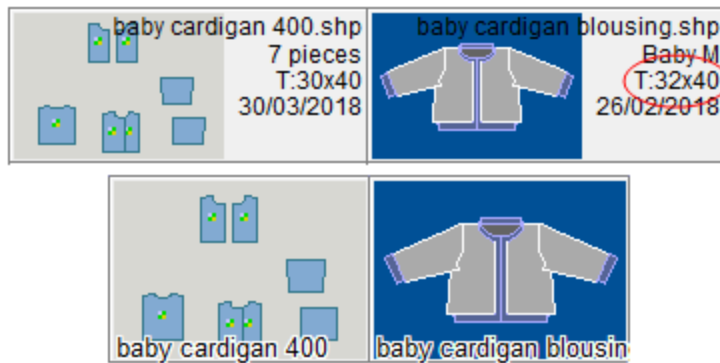
If the name of the required file is known it can be typed directly in the *.shp box at the top and will be opened on clicking "OK" or pressing the Enter key on the keyboard; typing the .shp extension is not necessary. When a letter is typed in front of *.shp, e.g., C*.shp, the program will display all shape files starting with C.

If a shape has been designed in Original Pattern Drafting it has a gray background and the number of pieces in the file is displayed. Standard Garment Styling garments have a blue background and show age group and gender type. More information on these how colors are used to quickly identify the nature of the files can be found in Workspace Colours ([See page 184](#)).

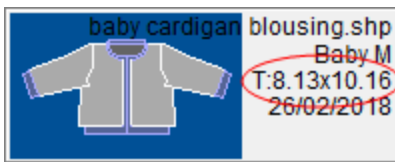
When a file is clicked on once in the thumbnails area on the right hand side, a larger image of it appears in the viewing area on the left hand side, in which it is easier to see details. Files that have been designed at least partly in Original Pattern Drafting will show the individual points that are used. The file that has been displayed in the example above has been started in Standard Garment Styling, as can be deduced from the "Adult F" indication, but has also been worked in and saved in Original Pattern Drafting as can be deduced by the light blue background and the presence of points in the viewing area.



If pieces in a shape file contain stitch patterns this is indicated by a small colored icon in the center of each relevant piece (see blue arrow above). Standard Garment Styling files do not display the individual pieces of the garment and show one icon over the shape to indicate that a stitch pattern has been integrated. If all pieces have been integrated with a stitch pattern, the icon is larger. Original Pattern Drafting displays all the pieces so it is easy to see which pieces, if any, have been integrated with a stitch pattern.



**Details** - can be unticked to display only the shapes with their names. When "Details" is ticked the file name is displayed, together with how many pieces there are (if created in Original Pattern Drafting) or the group the shape belongs to (if started as a Standard Garment Styling file), the tensions used and the date the file was last saved. If unticked, only the file name is displayed across the bottom of the thumbnails.



The tensions are shown according to settings in *Options / Units of Measurement*, which, for this example were set at "cms" in the image above and "inches" in the image on the left, resulting in "T:32x40" and "T:8.13x10.16" respectively.



The zoom in and out function can be used to increase or decrease the size of the thumbnails.

**View All** - (see fuchsia arrow in the image above) only becomes available after the "Search" button has been used to exclude some options from the view, e.g., if only Hand Knitting methods were chosen. Clicking "View All" will display all the files in the folder.

## Search shape files

The screenshot shows the 'Search options' dialog box with the following sections:

- Standard styles:**
  - Age group: ☒ Baby, ☒ Child, ☒ Adult
  - Gender: ☒ Female, ☒ Male
  - Garment type: ☒ Sweater, ☒ Cardigan, ☒ Waistcoat, ☒ Sleeveless pullover, ☒ Skirt
- Number of pattern pieces:**
  - ☐ Minimum 1 pieces
  - ☐ Maximum 16 pieces
- Embedded text:** ☒ (Red arrow points here)
- Date last saved:**
  - ☒ 30/09/2016 Earliest date
  - ☐ 30/09/2016 Latest date
- Design method:**
  - ☒ All pieces designed using only SGS
  - ☒ All pieces created or modified using OPD
  - ☒ Some pieces designed by each method

Buttons at the bottom: OK, Cancel, Help, Apply, Reset, Make default.

The "Search" button displays the dialog shown on the left which can be moved to a convenient location on the screen by clicking the title bar (see blue arrow), holding and dragging the mouse.

On first opening this dialog all the boxes of "Age group", "Gender" etc. are ticked so that all available files are shown. Unticking the various criteria will limit the search to those selected plus any files that do not have these options.

If a shape file has been created in Standard Garment Styling the criteria of "Age group", "Gender" etc. are part of the creation process and can be searched on.

If a shape file has been created in Original Pattern Drafting these options do not exist and ticking or unticking any of these options will not have any effect as the files will display anyway.

Ticking the box in front of "Embedded text" (see red arrow) makes it available. Entering text in here

will search the Notes that were entered in the Tension dialog ([See page 197](#)) as well as search for file names of stitch patterns that may be integrated and background image file names. Clicking "OK" or "Apply" will present the files that match the search criteria. The text is not case sensitive and only partial text needs to be entered to search on.

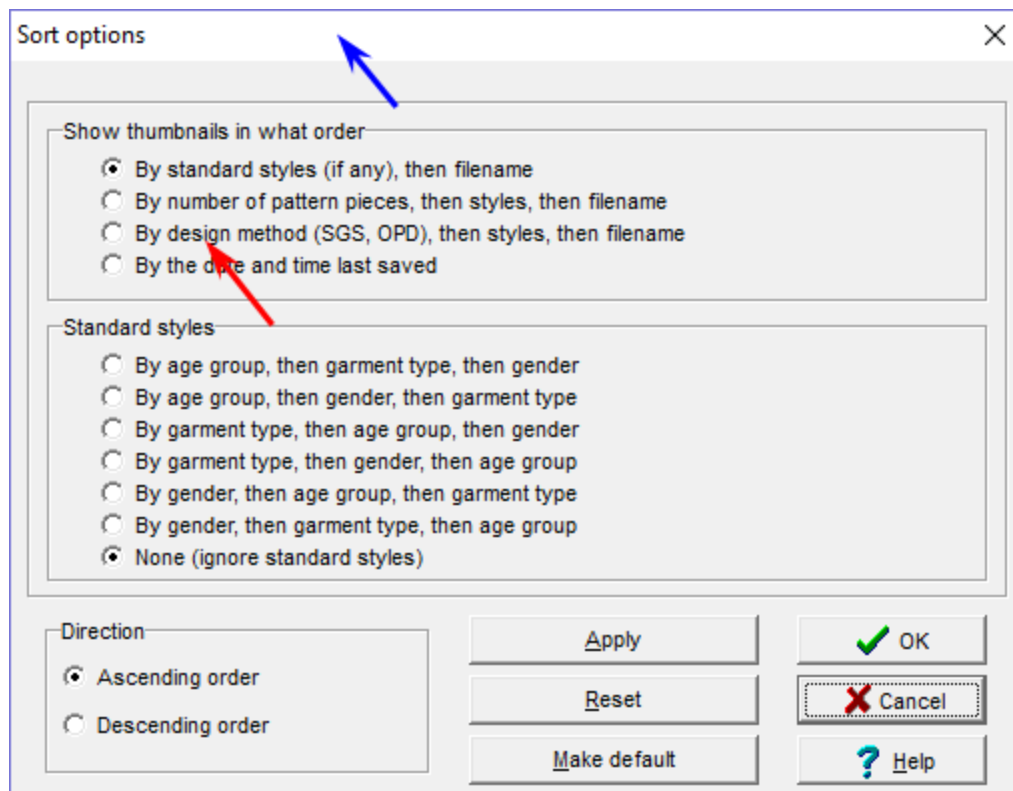
Clicking "Apply" after making the selections will apply the search while leaving the search dialog on top for further changes to be made. "Make default" will save the search for the next time. "Reset" will revert to the system defaults.

**Make default**

The "Make default" option can be very useful. After search criteria have been entered, and particularly if embedded text is searched on, making this search default ensures that when the Thumbnails Search dialog is opened again, the same criteria apply and do not have to be entered time and again. The "Reset" and "Make default" buttons need to be clicked to revert to the DesignaKnit default search criteria.

"OK" will apply the search and return to the Thumbnails dialog.

## Sort shape files



The "Sort" option displays the dialog shown on the left which can be moved to a convenient location on the screen by clicking the top title bar (see blue arrow), holding and dragging the mouse.

There are numerous ways in which the available files can be listed in either ascending or descending order. The standard style options like age group, gender, garment type etc. originate from the Standard Garment Styling part of DesignaKnit.

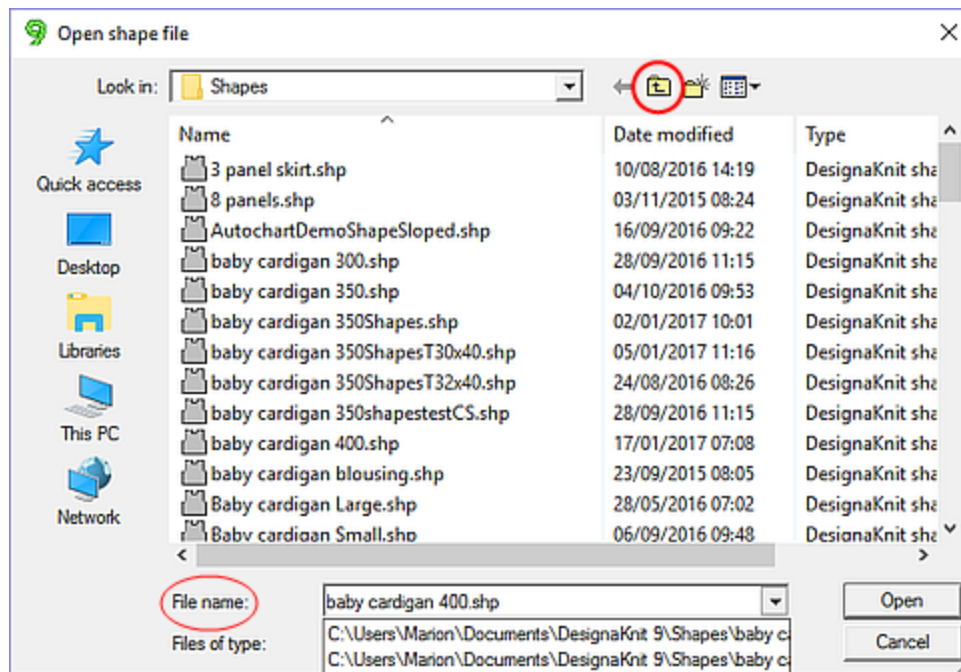
Selecting the option to sort "By design method" (see red arrow) will show all Standard Garment Styling

and all Original Pattern Drafting garments grouped together for easy perusal.

Once a sort order has been selected clicking "OK" will apply it and exit this box, while "Apply" leaves the selection box on the screen, allowing different sorting.

The options chosen can be made default by clicking "Make default". These settings are then applied to all future sorts. If the original DesignaKnit settings need to be reverted to "Reset" has to be clicked, followed by "Make default".

## File Open



An existing shape file can also be opened by using the *File / Open* menu option which displays fewer options but is a quick way to access files that are known.

The *File / Open* menu options from Original Pattern Drafting and Standard Garment Styling or the "Browse Shapes" button from Stitch Designer all display shape files only (*.shp) with the name and last amended date of each. When starting to type letters in "File name" the program responds by displaying the matching records and limiting the selection until the required shape can be chosen

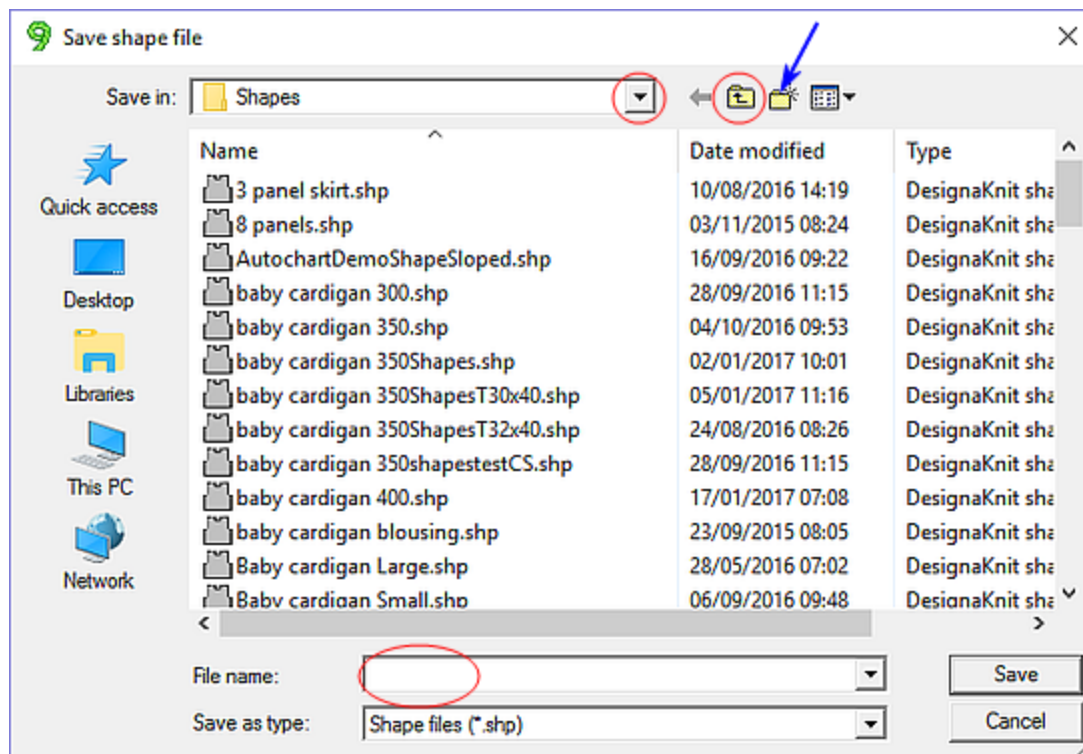
by clicking on it and then clicking "Open".

If the file is at a different location this can be navigated to by using the Windows button to move through the directories (See also [Folders and Paths on page 185](#)).

## File Save

When moving from one part of DesignaKnit to another or opening another shape file the program often prompts to save the current file, even if it is not apparent to the user that changes have been made. This is to ensure the continuity of the programming.

As with all computer based work, it is always a good idea to save often.



 The Save button on the Left Toolbar or the *File / Save* menu option can be used to save a shape file. If it has previously been saved, these options will save the file under the previous name without further prompting.

If this is a new file DesignaKnit will display the *File / Save As* dialog as shown on the left and a new file name needs to be typed in (see red oval). Alternatively the *File / Save As* menu

option can be used to give an existing file a different name and / or location.

If the file to be saved is a shape file DesignaKnit will open the default "Shapes" folder, if it is a stitch pattern file the "Stitch patterns" folder will be presented.

A different location may be navigated to by clicking the 'Up one level' button or the down arrow next to the "Save in:" entry box (see red circles).

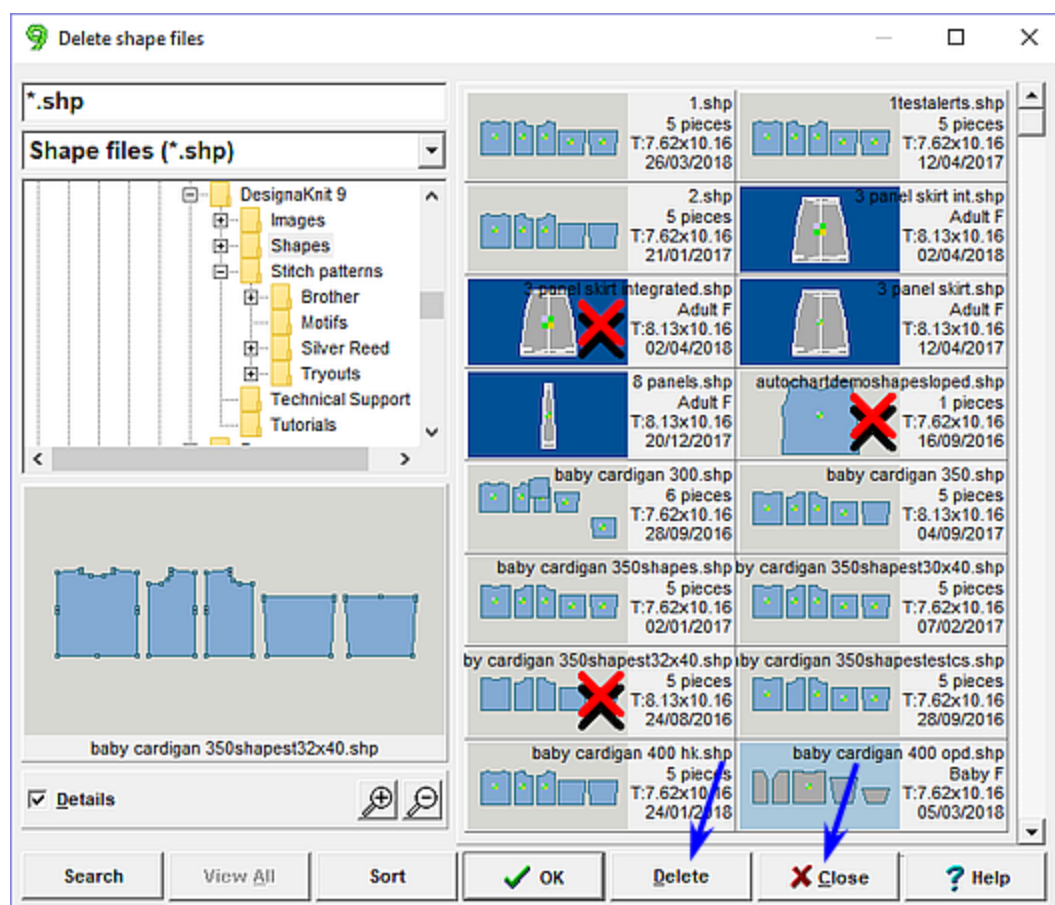
A new location can be created and specified by clicking the "Create New Folder" button (see blue arrow). The advantage of creating folders from here is that the new folder will be created in the correct location ([See also Folders and Paths on page 185](#)).

Although the default paths can be changed in DesignaKnit (see the manual in each section to learn how to do this), it is recommended to create folders that contain shapes underneath the "Shapes" folder as the program opens this folder by default when opening and saving shape files. Following this pattern will facilitate help desk calls as all files will be in expected locations.

## TIP!

Depending on what and how many designs are created and for what purpose, folders could be created for each category of shape file such as: Adults, Furnishings, Samples, Family etc. This will make it easier to locate specific files and keep them together for the purpose of backup.

## File Delete

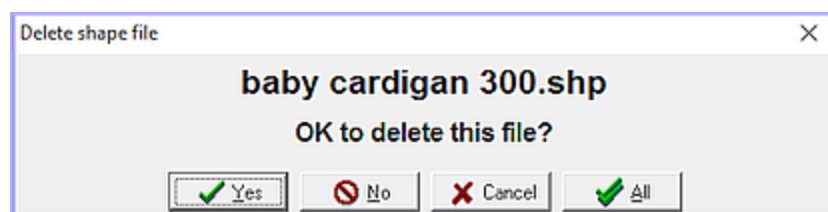


Using the *File / Delete* menu option in Original Pattern Drafting or Standard Garment Styling opens the dialog as shown on the left, from which files may be selected for deletion.

The options for showing details, zooming in and out, searching and sorting are identical to the *File / Thumbnails* options ([See page 237](#)).

The options of "Delete" and "Close" (see blue arrows) are different.

When clicking on a thumbnail a red cross appears over it. Clicking on it again removes it. In this way all files to be deleted can be selected.



Once files are selected the "Delete" or "Close" button may be clicked, after which the dialog shown on the left appears, showing the first file name in the list to be deleted.

For each file chosen, DesignaKnit will present the options for "Yes", "No",

"Cancel" and "All".

Clicking "Yes" deletes the file whose file name is currently shown in the box, after which the next one is presented with the same dialog. Clicking "All" deletes all chosen files without further prompting, "No" leaves the file in place, continuing with the next file if more than one has been selected, "Cancel" cancels the operation and returns to the Deleting Files screen, leaving options as they were chosen.



Deleting files cannot be undone. When files are deleted from DesignaKnit they do not end up in the Windows recycle bin but are removed completely.

## Graphic Files

<b>Thumbnails .....</b>	<b>245</b>
<b>File Open .....</b>	<b>249</b>

A wide variety of graphic files can be accessed in DesignaKnit in different ways for different purposes. Graphic files can be opened and manipulated in both Stitch Designer and DesignaKnit Graphics Studio after which they can be converted into a stitch pattern. Graphic files can also be used as a background image in Original Pattern Drafting so that a garment piece may be designed around it. More information can be found in the various manual of each program section.

How they are accessed is slightly different for some sections of DesignaKnit.

## Thumbnails

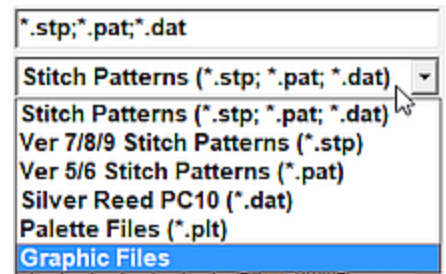
<b>Search Graphic Files .....</b>	<b>247</b>
<b>Sort Graphic Files .....</b>	<b>248</b>



 In **Stitch Designer**, graphic files can be accessed by using the *File / Thumbnails* menu option or "Ctrl-T", and selecting "Graphic Files" from the drop down selection box, as shown on the right.



After selecting "Graphic Files", all existing graphic files are displayed in the thumbnails window. All the file types that are included in the search



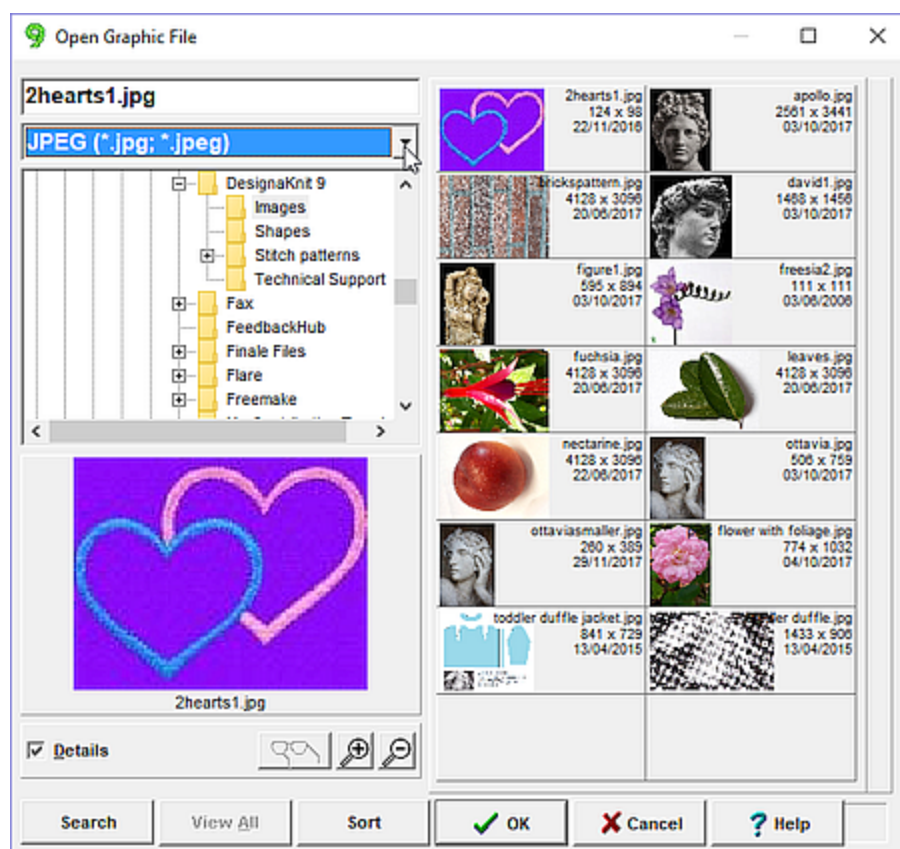
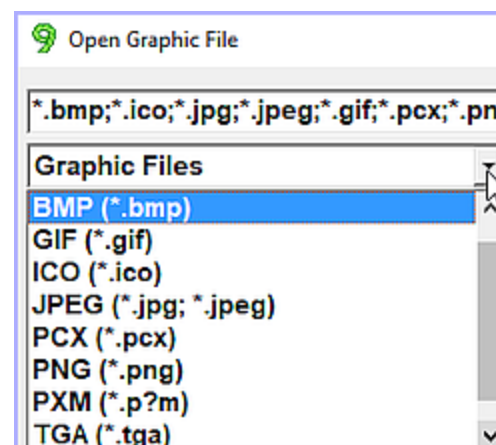
are listed in the search box, as shown on the left. The choice of types can be limited by selecting and deleting all the types that are not required, taking care to select the entire entry from * to ; as demonstrated here for the .gif file type. Pressing the Enter key will apply the criteria to limit the thumbnails display to the selected types, while the search box stays open for further editing. If a file type has inadvertently been removed it may be typed again to be added and pressing Enter will expand the selection of thumbnails to reflect the new criteria. If the file type to be looked for is known, the search box may be emptied by selecting all entries and pressing delete, then typing in the required file type, such as "*.png". If only one type is searched for, there is no need to type the separator ";".



In **DesignaKnit Graphics Studio**, graphic files can be accessed in thumbnail view by using the *File / Thumbnails* menu option, holding the "Ctrl" key while clicking the File open button or "Ctrl-T".

The choice can be narrowed further by clicking the drop down arrow (see white cursor arrow) and selecting the required file type in the "Open Graphic File" dialog.

Choosing the default top option of "Graphic Files" will display all the types that are listed: *.bmp, *.ico, *.jpg, *.jpeg, *.gif, *.pcx, *.png, *.tga, *.tif, *.p?m and *.wmf.



When one or all graphic file types are selected, a dialog as shown on the left will be presented. In this example the selection has been limited to '*.jpg' and '*.jpeg' files.

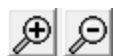
Clicking on one of the files in the right hand section will display its file name in the space below "Open Graphic File" and its enlarged image on the lower left hand side.

When the **"Details"** box is ticked, file name, size and date last saved are displayed on each thumbnail. Unticking "details" will leave the file name displayed over the image, hiding the rest of the information.

DesignaKnit presents the contents of the 'default folder' when opening graphic files. This folder can be specified separately for background images in Original Pattern Drafting, but is the normal default folder for Stitch Designer and DesignaKnit

Graphics Studio.

The **"View All"** button only becomes available after "Search" has been used and some options have been excluded from the view, e.g., if the images to display have been limited to a certain pixel range. Clicking "View All" will display all the files in the current folder.



The Zoom options can be clicked on to enlarge or reduce the view of the images. When the zoom level is at maximum, individual points can be seen on the pieces of Original Pattern Drafting pieces.



If the spectacles button becomes active, it means a high resolution preview of a large image is available and the button can be clicked on to display it. If the button is grayed out the preview already shows the highest possible resolution.

## Search Graphic Files

Initially the "Search options" dialog is presented with none of the options ticked and all of the criteria grayed out. To be able to enter criteria the box in front of it has to be ticked. The number of pixels refers to the height of the image. When "Details" is ticked in the "Open Graphic File" dialog the thumbnails will look similar to the one shown below. If unticked, the thumbnail will display an image and the file name only.

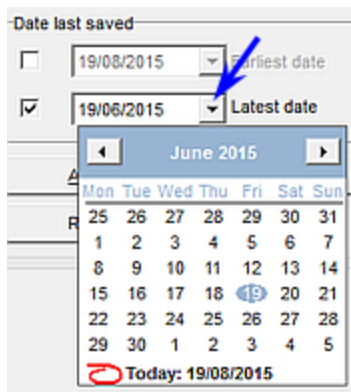


"841 x 729" represents the size of the image in pixels (width x height). This information gives an indication of the size of the background image used. Images resulting from a

scanner or camera are larger than images from a screenshot or clipart. The image size has no connection with the size of the

garment that will be created from it.

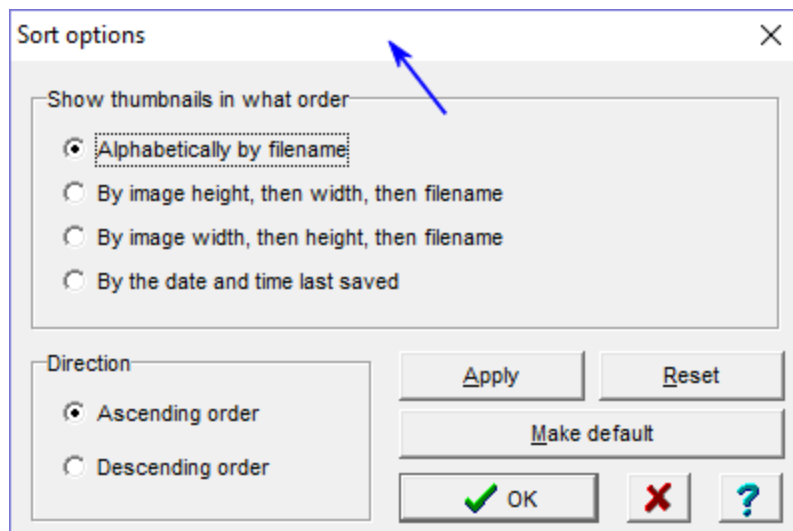
The "Search options" dialog is initially placed outside of the DesignaKnit workspace, and can easily be moved to a different location.



"Earliest date" and "Latest date" present the user with options to limit the view to certain dates that the file might have been saved. The dates can either be typed in or the arrow point can be clicked to open a calendar from which the desired date (s) can be chosen.

Initially earliest and latest date are set to "today's date" and if neither of the boxes are ticked DesignaKnit will ignore these settings and present all files that are present in the chosen folder.

## Sort Graphic Files



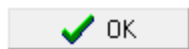
If there are a lot of image files to choose from this option provides a way of presenting them in a logical way. All options show the thumbnails in the "Open Graphic File" dialog in the background.

While "Search" will limit the selection to the chosen criteria, "Sort" will present all the files in a certain order: by name, size of height or width and by date. Sorting can either be ascending, from A - Z or earliest date to latest date, or descending, from Z - A or latest date to earliest date.

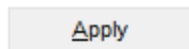
The "Sort options" dialog is initially placed outside of the DesignaKnit workspace, and can easily be moved to a different location on

the screen by clicking and holding the title bar (see blue arrow), then dragging it out of the way..

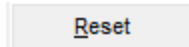
Once a search or sort order has been selected clicking:



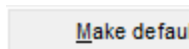
applies the options and exits the "Search" or "Sort" options box.



leaves the selection box on the screen, allowing different searching or sorting.



resets the criteria to the default DesignaKnit options.



will save the options for future "Search" or "Sort" actions.



cancels the "Search" or "Sort", exiting this screen and leaving all options as they were.



opens specific help with "Search" or "Sort".

## File Open



In **DesignaKnit Graphics Studio**, graphic files can be accessed in file list view by clicking the button on the Left Toolbar, using the *File / Open Graphic* or "Ctrl-O". This will present the "Open Graphic File" dialog, part of which is shown on the right, and is the quickest method of accessing graphic files. As thumbnails are generated from graphic files, which are generally much larger than the DesignaKnit shape and stitch pattern files, the thumbnails will take longer to appear on the screen.

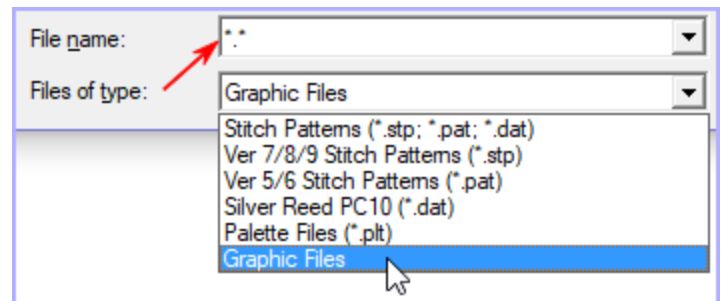
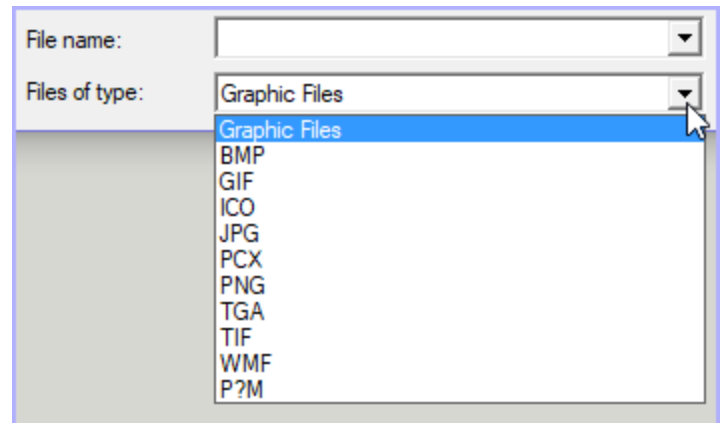


In **Original Pattern Drafting**, graphic files can be accessed by clicking the Graphic file image button (shown here) in the "Background Image Options" dialog. This will open the same list view of the graphic files in the folder that was set as default in *File / Default Folder for Background Images*. Thumbnail view may be opened by holding the "Ctrl" key while clicking the graphic file image open button in the "Background image options" dialog.

The selection may further be limited by choosing one of the file types that are listed. Selecting "Graphic Files" at the top of the list will redisplay all graphic file types.

In **Stitch Designer**, "Graphic Files" needs to be selected from the drop down list after using the *File / Open Stitch Pattern* menu option or "Ctrl-O" which will open the "Open Stitch Pattern" dialog, part of which has been shown on the right.

Because the File name entry is "*.*" (see red arrow), all the graphic files will be displayed, in list form. The choice of file types can be limited by typing in "*.jpg", "*.png" or whichever file type is required in the "File name:" box.



# Knitting Machines

<b>Memory considerations</b> .....	<b>252</b>
<b>Brother</b> .....	<b>253</b>
<b>Creative</b> .....	<b>259</b>
<b>Passap</b> .....	<b>259</b>
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There are various settings that are applicable to different knitting machines. For ease of access, all these specific properties and behaviors have been collated here, arranged by make of knitting machine. Where there is a reference to '**Japanese**' knitting machines this refers to the makes of Brother, Silver Reed and Toyota. Instructions for the setup of the different knitting machines have been provided in Machine Knit Options ([See page 118](#)).

Although double bed knitting machines can be used to produce the garments and stitch patterns created by DesignaKnit, this falls outside the scope of the manual, as DesignaKnit cannot be used to program the second bed or Ribber.

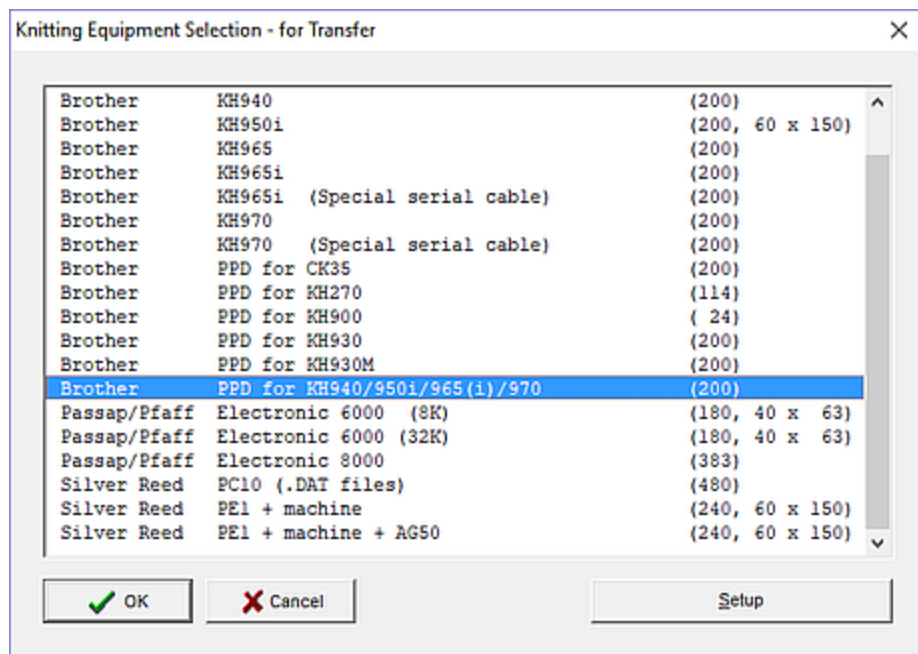
DesignaKnit can be linked to a wide variety of knitting machines through DesignaKnit cables in order to download stitch patterns from computer to knitting machine memory or upload stitch patterns from the knitting machine to the computer. This automates some of the process of knitting and produces relevant knitting instructions for the Interactive Knitting section of DesignaKnit. More information about available cable links can be found on [Soft Byte Ltd](https://www.softbyte.co.uk/cablelinks.htm) (<https://www.softbyte.co.uk/cablelinks.htm>) and in Cable Links Information ([See page 275](#)).

DesignaKnit 9 uses 'memo symbols' (see the relevant section in the Stitch Designer manual) to enable alarms in Interactive Knitting to indicate color changes, cable crossings, button holes, markers.

Knitting machines need information about shape, color changes, stitch patterns, stitches, lace, tensions, when needles need to be selected or deselected etc. in order to knit designed (garment) pieces. How this information gets to the knitting machine varies with each brand and model. Shape and color changer information are presented on the screen by Interactive Knitting or can be printed from Original Pattern Drafting and Standard Garment Styling ([See on page 138](#)). Information relating to stitches can be downloaded to certain machines, or punch cards and Mylar sheets can be prepared from printed templates.

Non-electronic knitting machines can receive instructions through punch cards or Mylar sheets, which can be created from a printed template ([See on page 166](#)). A KnitLink box and Magnet Arm can be attached to enable Interactive Knitting. More information about ways to connect computer to knitting machine can be found on [Soft Byte Ltd](https://www.softbyte.co.uk/cablelinks.htm) (<https://www.softbyte.co.uk/cablelinks.htm>).

Certain electronic knitting machines have their own memory in which pattern information is stored. Using a Cable Link enables downloading and uploading of stitch patterns for some machines, using DesignaKnit. For machines that do not have their own independent memory cable links can be supplied to connect to the knitting machine and act as its memory.



Where uploading (to DesignaKnit on the computer) and downloading (to the knitting machine) are applicable Stitch Designer can be used to communicate between DesignaKnit and the knitting machine. Selecting any of the options in the *Transfer* menu lists the possible knitting machines in a selection window like the one shown on the left. Only machines that are able to upload or download are shown and can be set up with various options by clicking on the "Setup" button.

Information regarding the setup of knitting machines can be found in Knitting machine setup ([See page 121](#)).



The following menu options are accessible in Stitch Designer only and are briefly described here to clarify the processes involved in uploading and downloading stitch patterns.

**Transfer / Upload** ([See page 221](#)) is used to copy custom stitch patterns from the knitting machine to DesignaKnit for safekeeping and for use in the program. Upload is only necessary if there are custom patterns present in the knitting machine and is possible only for Brother electronic machines and Silver Reed PE1.

**Transfer / Extract** ([See page 223](#)) is used to extract custom stitch pattern files that have been uploaded from a Brother knitting machine (or PPD) to DesignaKnit. Patterns must be extracted before they can be used in Stitch Designer. On upload the file name that is saved to will have the extension .bro. After extracting the pattern(s) the file(s) will have the usual .stp extension and are accessible for use.

**Transfer / Download** ([See page 228](#)) is used to copy stitch patterns from DesignaKnit to the knitting machine to use with Interactive Knitting or in case the patterns have been lost or overwritten in the knitting machine. This is possible for Brother electronic, Passap E6000, Passap E8000 and Silver Reed PE1 machines.

**Transfer / Integrated Download** ([See page 234](#)) is used where a stitch pattern has been integrated with a garment piece. DesignaKnit will download information to the knitting machine in such a way that the pattern is correctly positioned in the center of the needle bed. The difference between "Download" and "Integrated Download" is that the integrated download involves the selection of a garment piece. DesignaKnit shuffles the pattern horizontally and vertically to allow for the positioning of the stitch pattern on that piece. The knitting machine places whatever pattern has been downloaded (integrated or not) in the center of the needle bed.

As the position of the stitch pattern may be different for each piece of the shape file, a separate stitch pattern will need to be downloaded for each piece that has been integrated in Stitch Designer. This process is possible for Brother electronic, Passap E6000, Passap E8000 and Silver Reed PE1 machines.

**Transfer / Restore** (See page 226) is used to restore a previously uploaded batch of stitch patterns in case they have been overwritten or otherwise lost. This is only possible for Brother electronic machines.

## Memory considerations



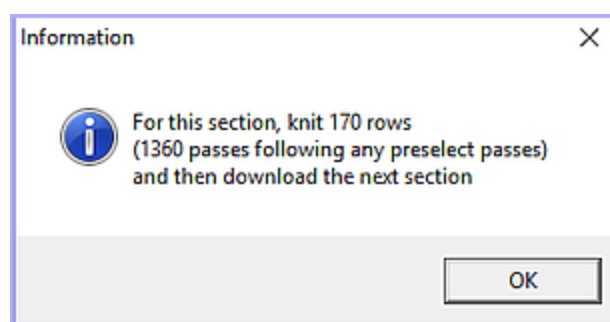
If, on downloading a single pattern, it proves to be too large to fit within one memory area, DesignaKnit will work out how to divide it in sections and instructions will be given at the Interactive Knitting stage as to when to download subsequent sections.

A message like the one shown on the left will be displayed. This enables the pattern to be downloaded in sections, while DesignaKnit calculates the memory requirements.

Large pattern downloads are more likely to occur in the case of Jacquard knitting where the colors have been separated. Each pattern row consists of two carriage passes for each color in that row, which results in a download that can be several times larger than the actual pattern would suggest. A similar scenario occurs where a pattern has been created using the Lace Tool.

Selecting "1" will download the first section to the knitting machine and DesignaKnit puts its own marker into the stitch pattern to enable it to pick up the rest of the pattern at the appropriate knit time in Interactive Knitting. An informational message such as the one shown here will be displayed.

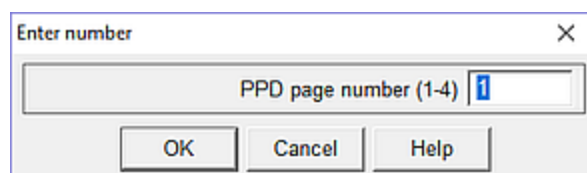
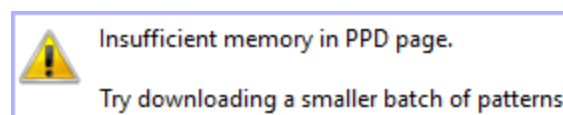
DesignaKnit will prompt to download the next section at the appropriate time with a message on the screen and an audible alarm if this has been set up.



Specific to each knitting machine make:

**Brother** - It is possible for a single stitch pattern to be too large to fit in the knitting machine or PPD memory. If the pattern requires more than 999 passes of the carriage or if the total number of stitches exceeds the available memory space the knitting machine will display an error and the pattern needs to be downloaded in sections. The 999 passes limit does not apply to the CK35. The situation of too many stitches for the available memory is likely to arise for the KH930 and the PPD in KH930 mode.

If a PPD is used and the pattern or batch of patterns is too large to fit in its memory, an error message will be shown. Clicking "OK", which is the only option of this dialog, will return the user to the workspace from where the process can be restarted, using a smaller pattern or batch.



If the PPD for KH900, KH930, KH930M, or the 'Extras' cartridge is selected, a message such as the one shown on the left will be presented in the event where the pattern is too large to fit into one page. If the box appears, a PPD page number will

need to be entered so that DesignaKnit knows which page of cartridge memory download (or upload) is to be used ([See on page 258](#)).

**Passap** - Regardless of the size of the Passap control unit's memory only one stitch pattern may be downloaded at a time. The memory areas of the knitting machine are intended to be used to store small complete patterns. They are not completely independent of each other. When DesignaKnit calculates whether a pattern will fit into the console memory, it assumes that all memory areas are empty. If a pattern is too large for one memory area, DesignaKnit will split it into sections and ask which section is to be used.

Although more than one stitch pattern can be stored in any one memory area, it is quite possible that one stitch pattern is too large to fit. This is easily the case for Jacquard patterns with multiple passes of the lock and where color separation is applied.

**Silver Reed** - The SilverLink 5 can hold data for approximately 16368 carriage passes for stitch patterns that are no wider than 64 stitches, 8184 passes if the pattern is no wider than 144 stitches, or 4092 passes if the pattern is wider than this. The number of carriage passes necessary to complete a row of lace knitting or multiples of Jacquard rows contribute to this total. If the pattern is too large to download it needs to be downloaded in sections.

## Brother

<b>Upload &amp; Download</b> .....	<b>253</b>
<b>Specific models</b> .....	<b>255</b>

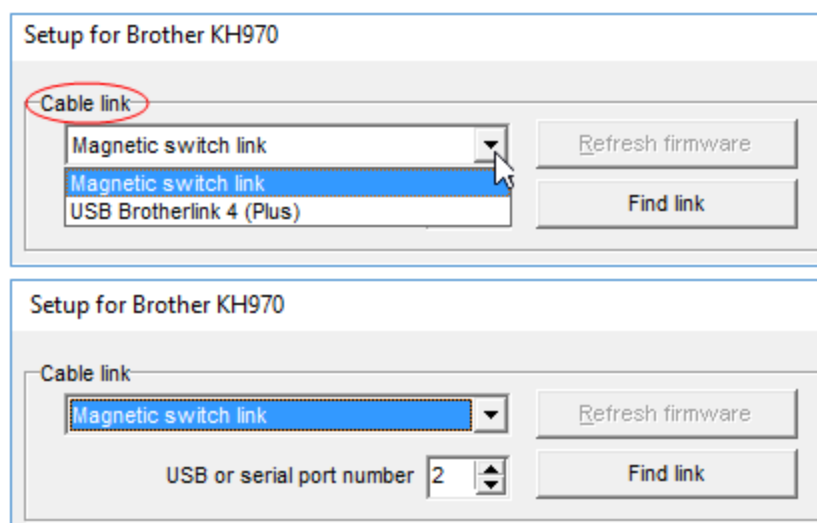
Brother is also known as Knitking in the US and is classed as a 'Japanese' machine.

Certain Brother electronic knitting machines have their own memory that stitch patterns can be downloaded to, but it is also possible to download stitch patterns to a Brother PPD (Pattern Programming Device) or CB-1 (for the KH970). These can then be transferred to the knitting machine memory. For specific information the knitting machine manual should be consulted.

A PPD is most commonly used to transfer stitch patterns where knitting machine and computer reside in different locations. Stitch patterns can be downloaded from the computer to a cartridge in the PPD, using DesignaKnit. The cartridge containing the patterns is then taken to the knitting machine and slotted into the corresponding slot. A Brother PPD can also be used to design stitch patterns for a Brother knitting machine. However, DesignaKnit provides easier solutions.

### Upload & Download

Stitch patterns can be downloaded to or uploaded from the knitting machine so that the correct needles will be selected at the knitting stage for a particular pattern. Brother electronic knitting machines have a memory that can be downloaded to or uploaded from, using one of the cables that can be supplied by Soft Byte Ltd. Available Brother cable links and information can be found on [Soft Byte Ltd \(https://www.soft-byte.co.uk/cablelinksbrother.htm\)](https://www.soft-byte.co.uk/cablelinksbrother.htm) and an overview of the different cable links in the Brother ([See page 279](#)) section of Cable Links Information ([See page 275](#)).



"Cable link" lists the available means of communication between DesignaKnit and the knitting machine.

Depending on the model of the knitting machine the cable links that are possible will be presented in *Options / Method of Knitting*. After a knitting machine has been selected, clicking the "Setup" button will present the dialog shown on the left from which a link can be selected, after which the correct Serial or USB port needs to be chosen. Preferably, if it is available for the selected cable link, the "Find Link" button should be clicked to identify and locate the correct connection.

Within Stitch Designer the **Transfer / Upload** menu option can be used to transfer the custom 900 series stitch patterns from a Brother electronic knitting machine or PPD (Pattern Programming Device) to DesignaKnit. The Brother built-in Stitch-World patterns are not accessible for upload but are supplied in the default stitch patterns folder and can be used throughout DesignaKnit. They can also be amended, saved into a different folder and downloaded to the Brother knitting machine as custom patterns.

The 900 series pattern numbers are custom patterns which have originated from a different source such as a PPD, USB device, disk drive or DesignaKnit. If present, they can be uploaded, and indeed should be uploaded before new custom patterns are downloaded (copied) to the knitting machine as, for many machines, they will be overwritten (see the individual knitting machine sections below).

The patterns will be uploaded to the default stitch patterns folder (See on page 185). The "Brother" folder that was created during installation of DesignaKnit is reserved for Brother's own copyright patterns and the error message shown here will appear if an attempt is made to save a stitch pattern here. When saving the uploaded patterns the user is prompted for a file name, to which the .bro suffix will be added automatically.



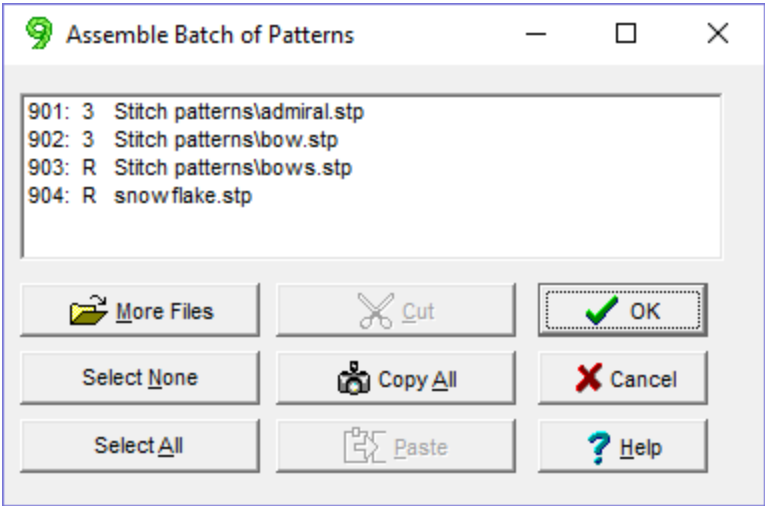
Please use a different folder to save your work in.

After stitch patterns have been uploaded from the knitting machine they need to be extracted by using the **Transfer / Extract** menu option which extracts the stitch pattern(s) from the .bro file and gives them the .stp extension which makes them accessible to DesignaKnit. One .bro file can contain one or many stitch pattern files.

Within Stitch Designer the **Transfer / Download** menu option can be used to download stitch patterns to the selected knitting machine or PPD.

Downloading or restoring to the Brother KH270, KH930, KH940, KH950i or PPD will erase all the 900 series patterns that are in the memory, even if only one stitch pattern is downloaded. Downloading or restoring to the KH965, KH965i and KH970, will add to the existing 900 series patterns. The knitting machine will offer the next available unused 900 series number for the new pattern.

On downloading the option is presented to either download the current stitch pattern or more files can be selected to assemble a batch of patterns to download in a single operation. Downloading a batch of stitch patterns is possible for the KH270, KH930, KH940, KH950i, KH965 and all PPDs.



If batch download is possible, the dialog shown on the left is presented. The dialog will contain stitch patterns that were selected in a previous session as DesignaKnit remembers this information.

As all patterns in a batch will be downloaded, unwanted entries may need to be removed and new ones added, including the stitch pattern on the workspace that may be intended for downloading at the present time.

Batches are limited to a certain total memory size that depends on which knitting machine has been selected and in any case up to a maximum of 98 patterns. If the specified batch exceeds the

knitting machine memory, an "insufficient memory" message is given and some patterns will need to be removed.

One or more stitch patterns can be selected by clicking on them, using combinations of holding the "Ctrl" and "Shift" keys if required to add files to the batch. Additionally, the "Select All" and "Select None" buttons can be used to change the selection. More information can be found about the download process in Download (See page 228).

If more stitch patterns from different locations need to be added, the "More Files" button can be clicked to search for and add them.

As soon as one stitch pattern is selected, the "Cut" button becomes available, which enables stitch patterns to be removed from the list. Care needs to be taken as this action cannot be undone (even by using the "Cancel" button) and if a pattern was removed from the middle of the list it cannot be placed back there unless all files after the desired position are cut and added anew.

The "Copy All" button can be clicked to place the contents of the displayed list into the Clipboard. This allows the list to be copied to an external program, such as a word processor, in order to keep a record of the pattern numbers for this download. This can be useful as pattern numbers are allocated by DesignaKnit according to the order in which the files are presented. It is a good idea to copy the list in this way before using the "Cut" button in case the wrong stitch pattern is cut.

"Paste" adds the contents of the clipboard to the end of the batch. If a list was previously copied to a word processor file it can be copied from there and pasted straight into this dialog, where all entries of the list will be added to the end of the batch. If the dialog is not previously emptied by using "Cut", this can result in duplicates of stitch patterns with different numbers, as DesignaKnit allocates a new sequential number to each file added.

Information regarding troubleshooting Brother uploading and downloading processes can be found on Soft Byte Ltd (<https://softbyte.co.uk/uploading&downloadingwithbrotherlinks.htm>).

Specific models

<b>KH930, KH940, KH950i or PPD .....</b>	<b>256</b>
<b>Brother KH965i and KH970 .....</b>	<b>256</b>
<b>KH965, KH270 .....</b>	<b>257</b>
<b>PPD in KH900 or KH930 mode .....</b>	<b>258</b>

## KH930, KH940, KH950i or PPD

All the 900 series custom stitch patterns will be overwritten when a download to one of these machines (or a PPD in the mode of one of these machines) is performed. Even if only one pattern is downloaded the memory of the machine is overwritten.

For this reason it is highly recommended to perform an upload prior to downloading to safeguard the custom stitch patterns. Provided an upload was performed, inadvertently overwritten or deleted 900 series stitch patterns can be restored using the *Transfer / Restore* menu option in Stitch Designer. Otherwise they will be lost.

Downloading from DesignaKnit into one of these knitting machines will not affect the built in patterns.

If the KH940 or KH950i are used with a BrotherLink 1, they require a blank stitch pattern to do plain knitting ([See page 281](#)).

There is a limit of 98 stitch patterns in a single download.

## Brother KH965i and KH970

Patterns are downloaded individually from Stitch Designer and are added to the knitting machine memory. Existing 900 series patterns should be erased from the knitting machine from time to time to ensure there is enough memory available for downloading. If the memory is full, download will fail. Before erasing stitch patterns it is good practice to upload them to DesignaKnit, so they can be downloaded at a future time.

If a BrotherLink 2 cable link is used with the KH970 the height at which the KnitLink box is set on the knitting machine console may need to be adjusted, using the Magnet Arm platform ([See on page 284](#)).

### Download process for the KH965i:

- The pattern to be transferred needs to be open.
- Using the *Transfer / Download* menu option, the appropriate machine and cable link need to be selected after which "OK" is clicked.
- If *Transfer / Integrated Download* is used the stitch pattern that is integrated with the selected piece will be downloaded, even if it is not the stitch pattern currently open on the workspace.
- When clicking the "Download" button in the next dialog a progress bar will appear until the pattern has downloaded. It will be allocated the next available 900 series number. If more patterns need to be downloaded this process needs to be repeated.

### Download process for the KH970:

- As above until the "Download" button is clicked.
- After clicking "Download" the on screen instructions need to be followed exactly to load the pattern into the CB-1.
- When download has finished the CB-1 needs to be switched off and the cable removed from the socket as Interactive Knitting cannot take place while the downloading cable is connected. More specific instructions can be found on [Soft Byte Ltd](https://www.softbyte.co.uk/uploading&downloadingwithbrotherlinks.htm) (<https://www.softbyte.co.uk/uploading&downloadingwithbrotherlinks.htm>).

As the KH970 has the facility to separate 3 and 4 color Jacquard patterns within the console, DesignaKnit offers a choice when it comes to downloading. The separation can be handled by the knitting machine (download as unseparated) or by DesignaKnit (download ready separated).

If an automatic Colour Changer is attached to the KH970 and configured to 'on' in DesignaKnit, it is necessary for every color in the pattern to have been assigned a Memo number in order to drive the automatic Colour Changer. This can be done through the *Palettes / Memo* menu option in Stitch Designer.

The option box shown above will be displayed when downloading 3 or 4 color Jacquard patterns. Whichever option is chosen will affect how the knitting machine should be configured and whether Interactive Knitting can be used.

The option to "**Download as an unseparated 3-color pattern**" should be ticked if the colors need to be separated by the knitting machine. If this is the case, the knitting machine should be set up following the manual instructions for patterns 479 to 483: both the double length button and the MCRib button should be ON.

If this method of downloading is chosen, color changing instructions cannot be followed for Interactive Knitting or for print outs. Instead, instructions that are displayed on the CB1 must be followed. If the user wants Interactive Knitting instructions for shaping, the project should be treated as knitting a Shape-only with a built in pattern.

Users may prefer to bypass the device and use DesignaKnit's configurable color separation instead, in which case the "**Download ready separated**" option needs to be ticked. The advantages of using the DesignaKnit color separation are that unused colors may be suppressed in the *View / Yarn Numbers & Feeders* menu option in Stitch Designer, and that Jacquard error checking may be done. More detailed information can be found in the Stitch Designer manual.

If the "Download ready separated" option is ticked DesignaKnit will handle the color separation, thereby giving freedom of choice of the method of Jacquard color separation, as well the ability to allocate specific colors to specific yarn feeders. When the Interactive Knitting instructions are followed, yarn changes and (for integrated patterns) shaping instructions will be fully synchronized with the carriage movement and selection of the needles.

The knitting machine needs to be set up correctly before starting to knit. It should be set up following the manual instructions as they are for patterns 484 to 498: both the double length button and the MCRib button should be OFF.

With the "Download ready separated" method, no matter how many colors per row there are after DesignaKnit has separated them, the CB1 will list the stitch pattern as a two color pattern.



## KH965, KH270

There are a few cable link possibilities for uploading / downloading to the KH965 and the KH270 knitting machines, all of which can be found on [Soft Byte Ltd](https://www.softbyte.co.uk/cablelinksbrother.htm) (<https://www.softbyte.co.uk/cablelinksbrother.htm>):

1. The Serial BrotherLink 4 can be used if there is one present. This cable link is no longer manufactured, as the chips for them are no longer produced. If there is no serial port in the computer it has to be used in combination with the USB Converter ([See page 283](#)).

2. It is possible to use the Cartridge Cable (USB BrotherLink 4), although it cannot be used by DesignaKnit and instead uses its own software.
3. The recommended option is the BrotherLink 3 with a PPD and cartridge III. Stitch patterns are downloaded to the PPD cartridge, then the cartridge is taken out of the PPD and plugged into the knitting machine. For the KH270 all the 900 series pattern numbers in the knitting machine have to be replaced with all those in the cartridge. For the KH965 all patterns have to be transferred individually from the cartridge to the knitting machine.
4. A slight variation to option 3 would be to use the USB BrotherLink 1 or USB BrotherLink 5, plus the (inexpensive) PPD Adapter ([See page 283](#)), instead of the USB BrotherLink 3. If one of these cables is already present or needed for a KH930, KH940 or KH950i knitting machine that may also be used, then this option would make the most sense.

The download process using a serial BrotherLink 4 cable link (and selecting the "Magnetic switch link") is as follows:

- Patterns need to be sent to the accompanying Knit Link box by using the *Transfer / Download* or *Transfer / Integrated Download* menu option in DesignaKnit.
- The KH270 can accept a batch of up to 98 patterns in a single download.
- The procedure then switches to the knitting machine. Press "Load", press "Step", enter the DesignaKnit pattern number, press "Step". The display will flash the next available pattern number in the machine's memory and assigns it to the DesignaKnit pattern. Press "Exec" to accept and transfer the pattern. The process has to be repeated for each pattern to be transferred.

**For the KH965** - It is likely that the numbers do not match and a note needs to be kept as to which DesignaKnit pattern number matches which knitting machine pattern number. A batch of patterns can be downloaded to the serial BrotherLink 4 cable link, but only one pattern at a time can then be transferred into the memory of the KH965.

**For the KH270** - The numbers of the patterns will be identical to the DesignaKnit numbers. All previously downloaded 900 series patterns are deleted automatically when the new batch is downloaded, so if the same pattern number already existed it will be overwritten. A batch of patterns can be downloaded to the serial BrotherLink 4 cable link and on downloading the only option is to transfer the whole batch into the memory of the KH270.

If the DesignaKnit and knitting machine pattern numbers are required to match, the existing patterns have to be deleted from the knitting machine, so that the new pattern numbers will start at 901. Provided the DesignaKnit stitch patterns also start at 901 they will be transferred one on one. The 888 function can be used to delete any existing 900 series patterns. The knitting machine manual can be referred to for instructions.

Uploaded pattern batch files (.bro) can be used interchangeably between the KH965 and the KH270 if both machines are available or if patterns need to be shared between users with either of them. This is true with the proviso that patterns downloaded or restored to the KH270 cannot be wider than the number of needles on that machine.

## PPD in KH900 or KH930 mode

The PPD's memory is much larger than that of the actual KH900 or KH930 machines and can hold a number of 'pages' (8 for the 900, 16 for the 930), each of which is the same size as the memory of the machine. The KH900 machine has 4k of memory and the PPD increases that capacity 8-fold to 32k. When downloading to the PPD a page number to put the download into can be selected. All information in that page will be overwritten. Other PPD pages are unaffected.

It is not possible to download to the PPD if the Stitch Pattern Extras cartridge is installed. Extras are extra Brother patterns that were also published as "Punch card book 5" by Brother and are included in the pb5 folder. Upload is available, but unnecessary as these stitch patterns are already present in the ..\ Stitch patterns \ Brother folder of DesignaKnit 9.

Creative

Creative are Chinese copies of Silver Reed machines. These machines are not electronic, therefore they cannot be linked to DesignaKnit by cable. Patterns cannot be downloaded or uploaded. However, the Interactive Knitting part of the program can still be used to provide very useful step by step instructions while knitting.

In addition, a so-called [ScreenLink](https://www.softbyte.co.uk/cablelinksscreenlink.htm) (https://www.softbyte.co.uk/cablelinksscreenlink.htm) can be used to allow signals to be passed from the knitting machine to DesignaKnit to match the movements of the carriage with the knitting instructions of Interactive Knitting.

Passap

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The Passap and Pfaff names are used interchangeably or referred to as Passap (Pfaff).

Tensions for Passap machines ([See on page 201](#)) refer to stitches and lock (carriage) passes instead of stitches and rows. Passap machine tensions are measured either horizontally in stitches and vertically in lock passes per 10 cm / 4 inches, or the measurement of 100 stitches and 100 lock passes is taken.

Passap machines cannot knit two colors simultaneously. Therefore the Fair Isle option is not available and 2 color Jacquard should be chosen instead.

Download

Using the appropriate DesignaKnit cable link ([See on page 281](#)), stitch patterns can be downloaded to the Passap E6000 and E8000 console using the *Transfer / Download* or *Transfer / Integrated Download* menu option in Stitch Designer.

The sequence of color changes and needle selections is controlled by a 'Technique' number. Technique numbers determine how many lock (carriage) passes are required to achieve a pattern row and are specific to each Passap machine. The Passap E6000 and E8000 use different technique numbers. The knitting machine manual will contain more information about which technique numbers need to be used.

Only one integrated pattern, as defined in the Stitch Designer *Shapes / Integrate* menu option, can be downloaded to the knitting machine at a time using *Transfer / Download* or *Transfer / Integrated Download*. The stitch patterns allocated to the garment piece are shuffled horizontally and vertically so that the stitch pattern is centralized on the needle bed.

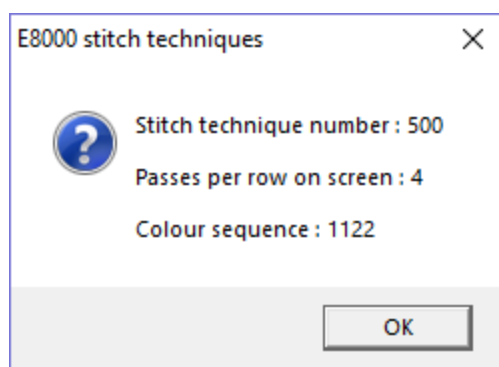


For Passap machines only 'Download' and 'Integrated Download' are available in the *Transfer* menu in Stitch Designer. Upload is not possible.

## Technique numbers

Passap (Pfaff) machines use technique numbers to communicate the correct instructions to the knitting machine. The selected technique number is used to calculate the number of lock passes per row of the pattern in Interactive Knitting and also affects the knitting direction(s) used for each row, and therefore the fine detail of the stitch outline for garment pieces. Information about the different technique numbers can be found in the knitting machine manual and are only touched on briefly here. The DesignaKnit technique numbers are used in order to apply the correct download and Interactive Knitting instructions.

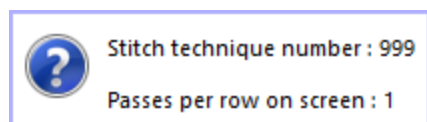
The default technique number that is configured in the knitting machine setup ([See page 129](#)) will be used for Shape-only pieces. If a stitch pattern is involved, either on its own or integrated with a garment piece, a different technique can be stipulated specifically for that stitch pattern if required ([See page 120](#)). The default technique number may not be compatible with the intended stitch pattern and will need to be checked by clicking in the Passap technique number box ([See page 120](#)). If an unsuitable technique is chosen, an error message to this effect will appear, allowing a different number to be entered.



The image on the left shows a Passap stitch technique information box. As well as appearing in Interactive Knitting when a Passap knitting machine has been chosen for knitting it will be displayed in Stitch Designer on selecting a number when selecting a default technique or when applying a different technique to a particular stitch pattern. The box contains information about which knitting machine, which technique number, how many passes per row will be needed to complete one row on the screen and which Colour sequence will be used.

In this example, Stitch Technique 500 is used and 4 passes of the lock are needed per row. The Colour sequence shows that there are only 2 colors in this pattern, which are used sequentially: 2 passes for the first color and 2 passes for the second, after which the sequence is repeated.

Instructions like "500 2 1122" (as for the example above) are embedded in DesignaKnit. Another, more complicated example is: "195 3 112233", which means that technique number 195 uses 3 yarn colors and knits them as follows: two passes of the lock (carriage) for color 1, two passes of the lock for color 2 and two passes of the lock for color 3. This entire set of instructions knits one row of finished fabric, which can result in very thick fabric.



When knitting a Shape-only piece in Interactive Knitting, technique number 999 may be used as a code to bypass the console, in order for pieces to be calculated with a single lock pass per row.

For almost all techniques, one row on the Stitch Designer, Original Pattern Drafting and Interactive Knitting workspace corresponds with two rows of finished fabric for the E6000, E8000 and Passap punch card machine.

If a technique number is used that does not double the rows, such as 129, 135, 172, 252, 253, 254 and 255, the number of rows and passes of the lock are the same. These numbers are only used for knitting methods that do not involve color separation, such as for Right / Wrong side facing texture methods.

Stitch Patterns are designed in Stitch Designer and need to be downloaded to the knitting machine before knitting so that the Passap and DesignaKnit agree on how to handle the color changes and passes of the lock. If the

technique numbers in DesignaKnit and the E6000 or E8000 console are not identical, it will lead to unexpected and usually unwanted results.

If the *Transfer / Integrated Download* menu option is used DesignaKnit will show shaping instructions for the piece to be knitted and will do so at the first pass of the lock on any row where shaping needs to take place. This can be tricky as the first yarn might not be used at the edge of the piece where the shaping needs to take place.



Some improvisation may be needed as shaping operations may need to be performed on a later pass of the lock and not on the first one as per the instructions. It is prudent to make notes of the row number where shaping is wanted to be consistent throughout the knitting.

## Specific models

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### E6000

Instructions for the preparation of the E6000 console can be found on [Soft Byte Ltd](https://soft-byte.co.uk/downloadingwithpassape6000links.htm) (<https://soft-byte.co.uk/downloadingwithpassape6000links.htm>).

The memory of the E6000 is limited and should not be used for long term storage of stitch patterns. They can, instead, be stored in the DesignaKnit stitch pattern folder (See Folders and Paths ([See page 185](#))) and downloaded whenever they are needed. It is good practice to erase the memory of the console prior to downloading a stitch pattern for the current project to ensure that the maximum amount of memory is available.

The E6000 has memory areas (referred to as A, B, C etc.) that can be allocated to stitch patterns. Each area is large enough to contain a three or four color stitch pattern with a total of 26000 stitches (a multiplication of stitches and rows). A downloaded pattern cannot contain more than 255 rows. This translates roughly to being able to download a pattern of 100 stitches by 255 rows, or 180 stitches by 144 rows. Machines with the newer 32K console chip can download a greater number of patterns into the separate memory areas than was possible with the 8K chip.

If the Passap 'Form' option is used rather than the DesignaKnit settings to send shaping information to the knitting machine this will reduce the amount of available memory. DesignaKnit does not take the Form option into account, so it is good practice to download patterns that are no larger than 26000 stitches in total if it is used. This limit applies to the E6000 8k console. If the downloaded pattern is too large, Form information may be lost.

When downloading or printing stitch templates for the Passap E6000, the needle selection for tuck and slip patterns is not inverted, so that it is not necessary to use the COL.REV option on the E6000 console.

**Chip set** - To enable communication between DesignaKnit and the knitting machine the knitting machine console needs to contain the correct chip set. Knitting machines produced after March 1991 (serial numbers 6025980 or later) or older machines where the chip has been upgraded will have the right set. Knitting machines with a serial number of 7037001 or higher will also contain the newer 32K chip. To determine the current chip set the console needs to be disconnected from both knitting machine and computer. Then the programming procedure (Power on, wait until the WAIT message disappears. Press the key with 3 triangles pointing right until it says PROGR if necessary, then press ENT, ENT and the required cast on number, ENT, NO) needs to be followed as far as ST.PATT A, after which the unlabelled key and "0" need to be pressed. If the console contains

the newer chip "ERR 213" will be displayed. More information can be found in the first section on [Soft Byte Ltd](https://softbyte.co.uk/downloadingwithpassape6000links.htm) (<https://softbyte.co.uk/downloadingwithpassape6000links.htm>).

Stitch patterns can be downloaded to the E6000 knitting machine console one at a time, by using the DesignaKnit E6000 Link 1 or Link 2. The first option allows download only whereas the Link 2 enables communication through Interactive Knitting as well.

After a download from DesignaKnit is complete the console prompts for a technique number, which should be identical to the number used in DesignaKnit, otherwise the knitting instructions will not make sense ([See on page 260](#)).

- A three color technique can use numbers 195 - 206 (not 219 - 230)
- A four color technique can use 207 - 218 (not 231 - 241)
- The comment in the E6000 manual that numbers 195 - 218 should be used for small patterns only can be safely ignored. The different number ranges (195 - 218 / 219 - 241) represent different ways of separating the colors and the lower range makes better use of the available memory. The higher range is in fact a duplication of the lower.

### **Download process:**

- Ensure the physical setup is correct, linking computer and knitting machine in the correct way for the selected cable link.
- Ensure there is enough memory available in the knitting machine to allow for the pattern to be downloaded. Using the 'Erase' procedure at the knitting machine console to clear the memory is good practice.
- The stitch pattern to be downloaded needs to be opened in Stitch Designer and the settings checked in *Options / Method of knitting*. If necessary the positions of the yarn feeders can be displayed and changed using the *View / Yarn Numbers & Feeders* menu option. This option needs to be unticked after use to be able to access the *Transfer* menu.
- *Transfer / Download* or *Transfer / Integrated Download* can be selected from the menu to start the download process.
- After selecting the correct knitting machine and technique number from the next dialog, a summary box is displayed listing technique number, passes per row and color sequence. Clicking "OK" will present the next dialog from which the port number can be changed if necessary. Downloading will start on clicking "Download" in this screen, after which the knitting machine console has to be prepared.
- The knitting machine will display "PC START" when "0" is pressed on the console. When "Download" is subsequently clicked in DesignaKnit the console message should change to "WAIT" and a progress bar displays the progress of the download, which should take a maximum of four minutes for a large pattern. After the download is complete the console should read "ALTER" to which "NO" should be replied. Then the correct technique number (identical to the technique number in DesignaKnit) needs to be entered. If knitting is to take place from the screen with Interactive Knitting "NO" should be replied to the next console message "ENLARGE / POSITION". Ensure that the work will fit inside the limits asked for by the console with regards to the left and right needle positions.

### **Knitting a single pattern repeat across the full needle bed:**

The Passap E6000 knitting machine has a total of 179 needles on the front (patterning) bed: 90 needles on the left side, and 89 on the right side. In spite of there being more needles on the left, downloaded patterns with an odd number of stitches are centered to the right. This is a characteristic of the E6000.

This curious feature means that if ever a color pattern is needed to extend over all 179 needles, a 180 stitch pattern should be created. Stitch 1 of the pattern will be on left needle 90, and stitch 179 on right needle 89, but stitch 180 of the pattern is not actually knit. This is because if a color pattern having 179 stitches was downloaded, that pattern would be centered to the right and therefore appear from left needle 89 to right needle 89, with the rightmost stitch corresponding to the non existent right needle 90 and therefore not knitted. The pattern on the leftmost stitch of the color pattern would appear on left needle 89, while left needle 90 is unused.

## E8000

Instructions for the preparation of the E8000 console can be found on [Soft Byte Ltd](https://soft-byte.co.uk/downloadingwiththepassape8000links.htm) (<https://soft-byte.co.uk/downloadingwiththepassape8000links.htm>). The E8000 Link cable links ([See on page 281](#)) enable downloading of stitch patterns as well as Interactive Knitting.

Stitch patterns must be downloaded one at a time or, in the case of integrated patterns, one piece at a time. Depending on the memory available, the console may be able to accept several patterns that are downloaded separately.

If the Control unit displays an error message during the download process, this may be because there is not enough available memory for the current pattern. One or more patterns will need to be deleted from the console to free up memory space after which the download can be attempted again.

### Download process:

- Ensure the physical setup is correct between computer and knitting machine, with the locks at the start position (or at least not opposite the red spot on the KnitLink box).
- The stitch pattern to be downloaded needs to be opened in Stitch Designer and the settings checked in *Options / Method of knitting*.
- The sequence of the colors is controlled by the "Memo" numbers. Each yarn has its own Memo number and the total amount of memo numbers must equal the maximum number of colors in a row. For a four color stitch pattern the numbers 1 to 4 can be used, for a three color pattern numbers 1 to 3. The numbers can be reused when the pattern switches to different colors, never exceeding the total number of colors set in the stitch pattern method of knitting.
- *Transfer / Download* or *Transfer / Integrated Download* can be selected from the menu to start the download process. After selecting the correct knitting machine and technique number DesignaKnit requests that the E8000 console is programmed until it shows "ON THE PC, SELECT KNIT A PATTERN". Downloading can start after the knitting machine console has been prepared.
- On the E8000 console "ProgS" needs to be selected, after which a memory sector number has to be entered (e.g., 1) followed by pressing the large ENT key. "3" has to be entered to indicate 'from ROM (read only memory)'.
- The correct technique number has to be entered by using the cursor down key to navigate to the right place, after which it can be entered and the ENT key pressed to accept it. "4" needs to be selected next to indicate 'from PC'.
- The cursor down key needs to be used to navigate to the place where a design number can be entered. This can be a number of choice to identify the design in DesignaKnit, after which the ENT key is pressed. It is recommended that this number forms part of the DesignaKnit 9 stitch pattern file name for easy identification. The design numbers should be limited to numbers between 3000 and 4000.
- After going through this process the console should now read "ON THE PC, SELECT KNIT A PATTERN" to indicate the knitting machine is ready to accept a download. The "OK" button in DesignaKnit and the

large ENT key on the console have to be clicked and pressed in turn, within 2 seconds of each other. If the keys were not pressed within 2 seconds of each other "4140" is displayed on the E8000 console and the procedure needs to be retried.

- When all goes well "PATTERN BEING TRANSFERRED" is displayed on the E8000 and a progress bar fills in DesignaKnit as the stitch pattern is transferred. The time taken for the transfer depends on the size of the pattern.
- The console can be programmed with further stitch patterns in the same manner, starting from the point of "4" (from PC). If a Passap technique is used that requires two patterns, one for the Back and one for the Front bed, the E8000 console will request the second pattern. If the second pattern is also to be downloaded from the PC, the procedure needs to be followed from the point of "4" (from PC).
- If a laptop is used, it can be taken to the knitting machine for downloading stitch patterns, but if the knitting machine is remote from the computer the E8000 console can be detached from the knitting machine, taken to the computer where the pattern(s) can be downloaded to it, then taken back to the knitting machine. Great care needs to be taken to plug the cables in correctly (see [http://softbyte.co.uk/CableManuals/E8000_1_2_ser.pdf](http://softbyte.co.uk/CableManuals/E8000_1_2_ser.pdf) or [http://softbyte.co.uk/CableManuals/E8000_1_2_USB.pdf](http://softbyte.co.uk/CableManuals/E8000_1_2_USB.pdf)), as otherwise the processing board of the console might be destroyed.

Duomatic 80

If a Duomatic 80 is used, the Passap Punch card machine needs to be selected in *Options / Method of Knitting*.

Silver Reed

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Knitmaster, Silver Seiko, Studio (as they are sold as in USA and Canada) and Singer (as they are sold as in South Africa and Australia) are all names that can be grouped under Silver Reed, which originates from the UK Knitmaster brand. Silver Reed is classed as a 'Japanese' machine.

Silver Reed is the only knitting machine that can automatically knit Intarsia electronically, using the AG50 Intarsia carriage.

Although Silver Reed electronic knitting machines do not have their own memory, Interactive Knitting can be done by using a Silverlink cable link (See page 278). This enables communication between DesignaKnit and the knitting machine and will act as the knitting machine memory.

The Silver Reed PE1 and the PC10 have their own memory. The PE1 has a memory that DesignaKnit can download to using the SilverLink 3, after which the patterning can be controlled by that device. The PC10 is similar but instead of downloading via a cable, DesignaKnit can create a special PC10 file on a memory card, which can be inserted into the PC10 connected to the Silver Reed carriage.

Upload & Download

The *Transfer / Download* menu option in Stitch Designer is used to download stitch patterns to the Silver Reed PE1 and PC10 pattern devices. The correct cable link needs to be in place to take advantage of this possibility for the PE1. For the PC10 the DesignaKnit computer needs an SD card slot to be able to transfer the pattern from computer to knitting machine.

For Silver Reed electronic machines the SilverLink controls the needle selection during knitting. If the status of the color changer is changed in DesignaKnit the needle selection will be adjusted immediately. When using the SilverLink 4 and 5 there may be a slight delay while the pattern reloads.

In order to upload patterns they have to be in the memory of the knitting machine. This is possible for the PE1 and the PC10 as they have independent memory.

With the exception of the Silver Reed AG50 Intarsia carriage which is specially designed for Intarsia knitting, Intarsia patterns cannot be downloaded. The AG50 carriage connects to DesignaKnit like a standard Silver Reed SK840 carriage, with the needle selection being controlled by the SilverLink. There is a brief download stage in which the needles to put the yarn over are preselected. DesignaKnit works out which needles are selected for which colors. There may be multiple passes of the carriage for each row.

Downloaded stitch patterns are placed in the center of the needle bed. To control the pattern area the point cams of the knitting machine can be used to 'move' the location of the pattern. The movement of the carriage can be kept to a minimum by keeping the point cams close to the needles that are worked. This can be done for every row if desired, but the point cam that is nearest the carriage must never be moved or the pattern will shift sideways. This could be at the right or left hand side depending on where the carriage is at the time.

## Specific models

<b>EC1 - Electronic Card Reader .....</b>	<b>265</b>
<b>PC10 - Pattern Controller .....</b>	<b>265</b>
<b>PE1 - Design Controller .....</b>	<b>266</b>

### EC1 - Electronic Card Reader

If there is no cable link the EC1 can be used with SK560, 580, 830, 840, 860, 890 machines. This unit reads Mylar sheets or punch cards that are fed into it to transfer stitch patterns to the knitting machine. DesignaKnit can print out the necessary templates for these cards or sheets Integrated template ([See page 166](#)) and the EC1, which is linked to the knitting machine carriage by a 'Curl cord' can read them.

If the SilverLink 4 or 5 cable link is used, DesignaKnit can communicate directly with the knitting machine through the cable link which is attached to the 'Curl cord', in which case the EC1 unit is not necessary.

The EC1 can be used as a power source for the serial Silverlink 3 cable link, which plugs into it and the PE1.

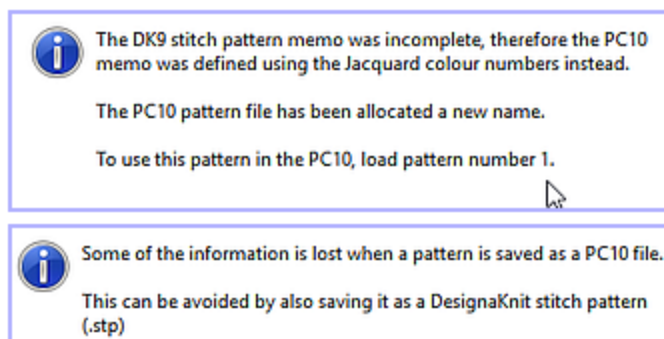
### PC10 - Pattern Controller

Patterns for the PC10 are saved in a specific format and instead of transferring them via a cable link, they are saved or copied from the computer onto an SD card which can be read by the PC10 Pattern Controller. If the card is not the one supplied with the PC10 it must first be formatted using the PC10 in order to be able to read the files. The computer needs an SD Card (not micro SD) slot, or an external card reader, for this feature to be used. PC10 files (with a .dat extension) will be visible along with other pattern files when opening them as Thumbnails ([See page 209](#)) or through the *File / Open Stitch Pattern* menu option.

The procedure of transferring a stitch pattern from DesignaKnit to the Silver Reed PC10 device is as follows:

- An SD card has to be inserted into an available slot on the computer, or into an external card reader which is attached to the computer.
- *Transfer / Download* in Stitch Designer is used to select the "Silver Reed PC10 (*.DAT files)" option. This option will transfer the stitch pattern that is currently open in Stitch Designer.

- Clicking "OK" opens the file explorer window to enable selection of the location of the memory card. DesignaKnit creates a "D000" folder in preparation for receiving stitch pattern files.
- After this preparation, individual patterns can be copied to the SD card by using the *File / Save As* menu option, selecting the correct location and the .dat extension from the drop down list. The pattern will be converted and saved on clicking "OK". DesignaKnit can present some information screens, such as shown on the right.



- If more than one pattern is transferred to this folder the program will allocate sequential file names, starting with "SR00000.DAT". Note that SR00000.dat is the pattern that DesignaKnit allocates the number "1" to, as in the image above.
- The memory card has to be inserted into the PC10 device of the knitting machine and the correct stitch pattern number selected to start knitting with this pattern.

Uploading from the PC10 device is possible by inserting the SD card into the computer (or external card reader attached to the computer) and copying the .dat files into a folder using the normal Windows copy commands. The recommended location to copy files to is "Documents \ DesignaKnit 9 \Stitch Patterns \Silver Reed". This can be done to keep a safe copy of the PC10 patterns on the computer.

## PE1 - Design Controller

Stitch patterns can be uploaded one at a time from the PE1 to DesignaKnit using the SilverLink 3 ([See page 278](#)). The pattern to be uploaded must be in the PE1's memory, which can be achieved by reading a Mylar sheet from the EC1 into it. With the PE1 connected to the computer where DesignaKnit is installed, the *Transfer / Upload* menu option can be used. This results in the stitch pattern being placed on to the Stitch Designer workspace immediately from where it can be given a name and saved for future use by choosing the *File / Save As* menu option. Care needs to be taken to use the .dat extension if this pattern is to be downloaded to the knitting machine again at some point.

The procedure for downloading a stitch pattern to the PE1 is as follows:

- The computer needs to be linked to the knitting machine with a SilverLink 3. The USB SilverLink 3 (or serial with a USB Converter) connects the PE1 to a USB port on the computer. The power to the PE1 is supplied through the USB port. A serial SilverLink 3 connects a serial port on the computer, the PE1 and the EC1. In this case the EC1 supplies the PE1 with power.
- The stitch pattern needs to be open in Stitch Designer.
- *Transfer / Download* or *Transfer / Integrated Download* needs to be selected from the Stitch Designer menu after which the correct knitting equipment needs to be chosen. This is either "PE1 + machine" or "PE1 + machine + AG50", depending on whether the Intarsia (AG50) carriage is used.
- Clicking "Download" starts the download process.
- When download is complete the EC1 needs to be switched off and the SilverLink removed if the serial SilverLink 3 has been used. The EC1 and PE1 then need to be connected with their original cable. After loading the appropriate pattern number from the PE1 knitting with the downloaded pattern can commence.

Patterns that are wider than 60 stitches or have more than 150 rows will be downloaded in sections. DesignaKnit will prompt to press the "=" key on the PE1 device if more than one section is necessary. After downloading the PE1 will beep, briefly display "COMPLETED", beep again and show "OK".

The PE1 memory can contain only one pattern at a time. There is a special non-standard memory card for the PE1 that can store a lot of patterns. It assigns its own number to a downloaded pattern at the time of saving it onto the memory card. However, this card cannot be read by a computer or normal card reader.

If method D is used for Jacquard color separation, the screen instructions for downloading include pressing the F3 key on the PE1 to indicate Jacquard knitting.

## Superba

Superba knitting machines do not have an independent memory and their configuration is such that a cable link is not possible. DesignaKnit allows selection of this machine for designing garments in Standard Garment Styling and Original Pattern Drafting and stitch patterns in Stitch Designer, but download or upload of stitch patterns is not possible. A [ScreenLink](http://softbyte.co.uk/CableManuals/Screenlink_USB.pdf) ([http://softbyte.co.uk/CableManuals/Screenlink_USB.pdf](http://softbyte.co.uk/CableManuals/Screenlink_USB.pdf)) can be used to enable Interactive Knitting.

## Toyota

Toyota machines are not electronic and cannot be electronically linked to DesignaKnit by cable, except for the [ScreenLink](http://softbyte.co.uk/CableManuals/Screenlink_USB.pdf) ([http://softbyte.co.uk/CableManuals/Screenlink_USB.pdf](http://softbyte.co.uk/CableManuals/Screenlink_USB.pdf)). Patterns cannot be downloaded or uploaded. However, the Interactive Knitting part of the program can still be used with the ScreenLink in place, to provide very useful step by step instructions while knitting. Toyota is classed as a 'Japanese' machine.

Even though Toyota is not an electronic machine, Interactive Knitting can be used when the ScreenLink is installed.

# Colour Changer

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The different buttons shown here are used to represent the Colour Changer for different knitting machines. Clicking on the button where it appears will toggle its "On" and "Off" state and a red cross is superimposed when it is switched off. Brother, Silver Reed and Passap icons are shown respectively in their 'on' an 'off' state.

  The Colour Changer can be switched on and off in the "Machine Knit Options" dialog for each stitch pattern ([See page 119](#)), by clicking the "Use of Colour Changer" button on the Stitch Designer palette (shown to the left), or by clicking its button in the Interactive Knitting Left Toolbar if it is present. The button is absent in Interactive Knitting for Intarsia patterns as the Changer cannot be used for this method.

The state of the Colour Changer is a property of the stitch pattern.

Depending on the method of knitting, yarns are threaded into the carriage feeders as follows:

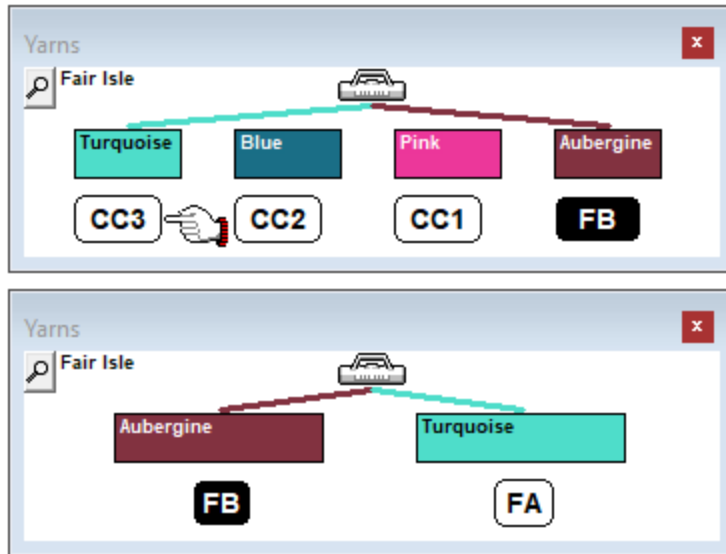
- For Shape-only pieces, which are knitted in one color, the yarn will be threaded through the front feeder of the carriage.
- Fair Isle & Thread lace are the only techniques where two yarns can be in the front and rear carriage simultaneously. Where a pattern has two colors in a row, that area will be recognized as Fair Isle. When a Colour Changer is used the 'main' yarn is threaded through the front feeder, while the contrast yarns are waiting in the Changer to be picked up and fed to the rear feeder. If there is an obvious choice of main color, such as one color that exists on every row in the stitch pattern, and the Colour Changer status is changed, the needle selection will be inverted automatically. If the selecting color also has the Thread Lace symbol applied, the appropriate instructions for this will be generated in Interactive Knitting.
- Jacquard works with each color separately. When a Colour Changer is used, each yarn is fed from the Changer to the rear carriage feeder in turn, as needed.
- Right / Wrong side facing texture methods are based on the currently used yarn being fed to the rear feeder. A single opaque color in each row specifies the actual yarn color, while transparent colors can be used for memo purposes. Smart Symbols determine the selection of the needles. When a Colour Changer is used each yarn is picked up and fed through the rear carriage feeder as required.

When a Colour Changer is used, yarns on selecting needles are directed to the front carriage feeder and yarns on deselecting needles are in the Changer, to be fed to the rear carriage feeder at the appropriate times. The needle selection status of yarns can only be changed for Fair Isle patterns by using "Ctrl-E" to swap the selection status of all yarns or by clicking the selection indicator for individual yarns in the Palette. Switching on the Colour Changer can invert the needle selection indicators in the Stitch Designer Palette for Fair Isle patterns if there is a single obvious main color and the needle selection assignment is wrong for the current Colour Changer status.

The needle selections are not affected by changing the Colour Changer status for Jacquard and Right / Wrong side facing texture methods.

DesignaKnit presumes that a Colour Changer has four positions to take yarns and the Interactive Knitting screen shows the positions of the different yarns for each row.

## Examples

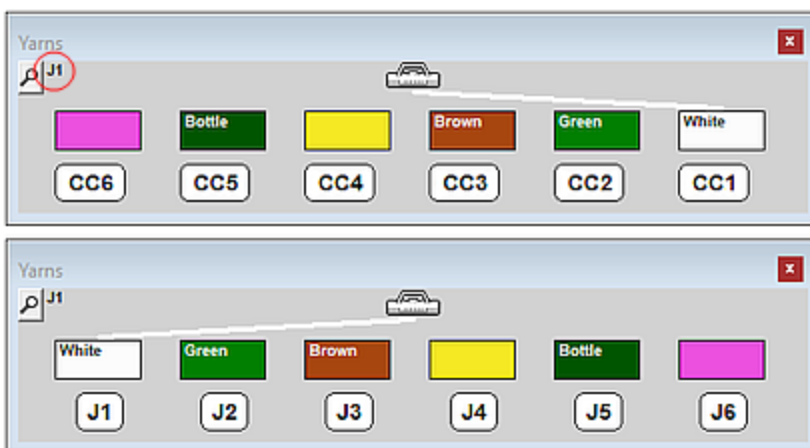


The examples on the left show a **Fair Isle** stitch pattern in the Interactive Knitting "Yarns" window, that is to be knitted on a Brother KH965. The top image shows the Colour Changer in use with three yarns in the Changer which is indicated by the preceding "CC" at positions 3, 2 and 1, while one yarn is in feeder B (front feeder), as indicated by "FB". The Aubergine yarn from the front feeder is worked at the same time as one of the yarns on the feeder, which is Turquoise on position 3 in this example.

If 4 tension wires are available for Fair Isle, one of them is used for the main yarn which is fed through the front feeder, leaving the contrast colors to be threaded through the Colour Changer and changed over to the rear feeder as required, by displaying a Hand symbol next to the yarn that is to

be used next (see top image). If more tension wires are available and the option is ticked ([See page 122](#)), all positions on the Colour Changer, up to a maximum of 4, can be used in addition to the front feeder.

The bottom image shows the same Fair Isle pattern for which the Colour Changer has been switched off. The front and back feeder have swapped position in the "Yarns" window and there are now only two yarns, one on the front (B) and one on the back (A) feeder.



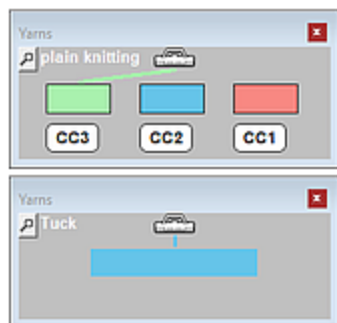
For **Jacquard**, Stitch Designer shows the Yarn sequence numbers when Yarn Numbers & Feeders are displayed, while Interactive Knitting shows both sequence number and Colour Changer position if a Changer is in use.

If a Changer is in use, all yarns are taken from the Changer and fed to the rear feeder on the knitting machine carriage in their turn, while the front feeder is unused.

If the Colour Changer is on, the positions are preceded by CC in the Interactive Knitting "Yarns" window, otherwise they

show J and a sequence number. Switching the Changer on or off reverses the sequence that is shown so that the order is descending when a Changer is in use and ascending when it is not.

The yarn sequence number is shown in the top left hand corner (see red circle), and the positions on the Colour Changer below the yarn blocks. For a 6 color Jacquard pattern, as demonstrated above, 6 yarns are shown and when the Colour Changer is switched on, 6 Colour Changer positions are shown (top image), even though the physical Changer may only have 4 positions. If there are only 3 colors in total in a 3 color Jacquard pattern, only 3 positions will be shown.



**Right / Wrong side facing texture methods** are knitted with texture rather than color. If the pattern contains just one color, the "Yarns" window will not appear. However, if the pattern contains bands of color in addition to the texture patterning, the "Yarns" window will show the color that is knitted in the current row.

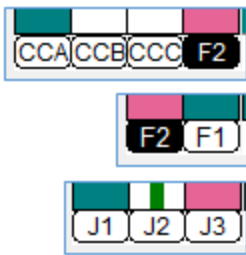
In this example, a Right side facing texture stitch pattern that contains three color bands as well as texture symbols is used to demonstrate. The top image shows the "Yarns" window with a Colour Changer in use and the bottom without. The Changer positions are given only when a changer is in use, otherwise there is no indication as only one yarn is used at a time and the normal feeder will be used.

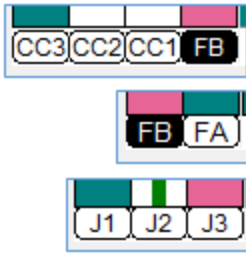
There is no option to use a Colour Changer for **Intarsia** knitting.

## Numbers and Letters

The combination and order of numbers and letters of the Yarn Numbers & Feeders in Stitch Designer are different for different makes of knitting machine, as described below.

- **Silver Reed, Creative, Plain Knitters** - Fair Isle patterns display the front feeder (F2) as well as the colors that are fed from the Changer if one is in use. The latter are displayed as CC, followed by a letter in ascending order from left to right. Carriage feeders F2 and F1 are displayed if a Colour Changer is not in use. Jacquard patterns display "J" with the yarn sequence number whether or not a Changer is in use. The number of yarns that is shown depends on the number of colors in the pattern as well as the available positions. A Fair Isle pattern that has more than two colors in total can display up to four color positions. A 6 color Jacquard pattern will display 6 yarn positions, while a 3 color pattern will display 3 positions if there are 3 colors in total, but up to 4 positions will be used if there are more than 3 colors in total. The Silver Reed Colour Changer in single bed mode has a front feeder to carry a second yarn, which is the background color. The images on the right depict, from top to bottom, a Fair Isle pattern with and without a Colour Changer, followed by a 3 color Jacquard pattern. Jacquard patterns are displayed in the same way in Stitch Designer whether a Colour Changer is in use or not. It is not possible to access Yarn Numbers & Feeders for the Silver Reed + AG50 and an error message will appear to this effect if it is attempted (see below).


- **Brother, Superba, Toyota, NovaKnit** - Fair Isle patterns display the front feeder (FB) as well as the yarns in the Changer if one is in use. These are indicated by CC, followed by a number in descending order from left to right. The descending order matches the numbering of the physical Changer. If the Colour Changer is switched off, only the carriage feeders FB (front) and FA (back) are shown. Jacquard patterns are represented as described in the Silver Reed section above. "J" is displayed, followed by the yarn sequence number in ascending order from left to



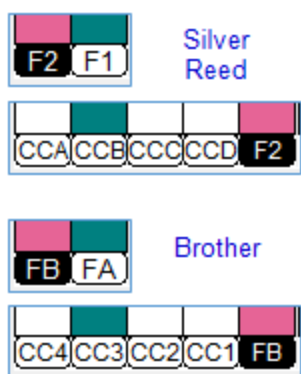
right, whether a Colour Changer is in use or not. From top to bottom, the images on the right show a Fair Isle pattern with a Colour Changer, without one and a 3 color Jacquard pattern.

- **Passap** - As these knitting machines cannot do Fair Isle and handle Jacquard in their own way, it is not possible to set the Yarn Numbers & Feeders in DesignaKnit. An error message, as shown on the right, will appear when attempting to access Yarn Numbers & Feeders while Passap or Silver Reed + AG50 knitting machines are selected.



This option is not available for Passap machines, or for the AG50.

The color sequence for Jacquard patterns in Stitch Designer signifies the sequence of the yarns and not the feeder positions, so the columns are labelled J1, J2 etc. as shown above, whether a Colour Changer is in use or not. For other knit methods the columns are labelled F1, F2 (Silver Reed) or FA, FB (Brother) if the Colour Changer is switched to 'off', where F is a reminder that these numbers or letters are Feeders and not Colour Changer positions.



A Fair Isle pattern has been used as an example to produce the images on the left, where for each machine, the Yarn Numbers & Feeders have been shown without and with a Colour Changer respectively.

If a Colour Changer is in use for methods other than Jacquard, there is a mixture of letters and numbers in Yarn Numbers & Feeders. Silver Reed carriage feeders are labelled 1 and 2, while Silver Reed Colour Changer positions are A to D, as shown on the left. When a Fair Isle pattern is knitted on a Silver Reed machine with a Colour Changer, the main yarn goes to front feeder 2 on the carriage and the contrast yarns to rear feeders A to D on the changer, as required. If there were only 3 colors in total, only front feeder F2 and Changer feeders A and B would be used. In this example, the pattern contained enough colors to use all 4 Changer positions. The yarns are

swapped between feeders as necessary.

Brother knitting machines use A and B for the feeders and 1 to 4 for the Changer positions. The main yarn of a Fair Isle pattern goes to front feeder B on the carriage and the contrast yarns to back feeder positions 1 to 4, as required.

Yarn Numbers & Feeders have been described in detail in the Stitch Designer manual (Manipulating stitch patterns chapter).

## Fair Isle and Colour Changer

As changing the Colour Changer status has different consequences for downloading, printing and Interactive Knitting procedures for Fair Isle patterns on different machines, the different scenarios have been described below.

**General** - a Colour Changer can only be used for Fair Isle on a Japanese knitting machine ([See page 250](#)) if all the color changes take place on odd numbered rows and a warning will be given if needed. If they are on even numbered rows, the carriage is in the wrong position to take a new yarn from the changer.

**Brother Electronic Knitting Machines, PPD, Silver Reed PE1** - whatever the status of the Colour Changer, Fair Isle stitch patterns will be downloaded as if the Colour Changer were off because, once downloaded, there is no way of telling whether it was on or off at the time of downloading. If the Colour Changer is switched on for knitting by clicking the Colour Changer button in Interactive Knitting, the 'Negative' switch on the knitting machine or device should also be used.

If a pattern was saved with the Colour Changer on, the yarn instructions in Interactive Knitting will be for the Colour Changer, but the 'Negative' switch on the knitting machine or pattern device still needs to be used to make the selection match the Interactive Knitting instructions. If, at the knitting stage it is decided not to use the Colour Changer, the button can be clicked off and the yarn instructions will be for the normal carriage feeders. The pattern can then be knitted as downloaded, without using the negative switch.

If a Fair Isle pattern also contains bands of other techniques, Interactive Knitting will give reminders of when to set the negative switch to 'on' or 'off'.

**Silver Reed Electronic Knitting Machines** - the way in which the needles select will be determined by the status of the Colour Changer in the Interactive Knitting screen. If the pattern was saved with the Colour Changer on, it will be opened in this mode and the pattern will be downloaded via the SilverLink to match. If the Colour Changer is subsequently switched off in Interactive Knitting by clicking its button so that a red cross is super-imposed, the pattern will be downloaded with the selection changed back to normal Fair Isle. If a SilverLink 4 or 5 is used there will be a pause while the pattern that is held in the box is replaced.

If more than four tension wires are available, four contrast colors can be threaded into the Colour Changer and the fifth tension wire can be used for the front feeder yarn.

**Toyota and other Punch Card Machines** - if the Colour Changer is configured 'on' at the time of printing a template for the punch card, the needle selection for the card will be arranged for use with the Colour Changer. If it is configured 'off' at the time of printing, the needle selection will be arranged for use with the normal carriage. When a punch card or reader template is printed for a Fair Isle pattern, there is an option to invert the printout so that it agrees with the Colour Changer setting.

## Carriage position

Although Brother and Silver Reed Colour Changers are both at the left side of the bed, they work differently. For Silver Reed, the Yarn select button needs to be pushed when the carriage is at the right side before the yarn is returned to the Changer. For Brother, the Yarn select button needs to be pushed when the carriage is at the left side.



During knitting, the physical carriage must be on the same side as the on screen carriage in the "Piece Overview" progress window in the top right hand side of the Interactive Knitting workspace. The carriage position is determined as

follows:

- If a Colour Changer is configured "on", its position is determined by the side the Colour Changer needs the carriage to be on, which is determined by:
  - The type of Colour Changer that is used and to which side of the Needle bed it is attached. For example, Japanese machines have the Colour Changer on the left hand side, while the Passap Changer is on the right hand side.
  - The color separation method used for Jacquard knitting methods, which is configured independent of the knitting machine.
- If there is no Colour Changer or it is configured "off ":
  - When knitting a swatch, its position is controlled by the "Start swatch with CAL" setting in the knitting machine setup.

- When knitting a Shape-only, it is controlled by the "Start which side" setting in *Options / Shape-only*.
- When knitting an integrated garment piece, it is controlled by the "CAL" setting in *File / Integrate* in Original Pattern Drafting or Stitch Designer, or by the Knit Direction Indicator in the Top Toolbar in Original Pattern Drafting, or by the setting of the Colour Changer in the *Transfer / Integrated Download* or the *Shapes / Integrate* menu option in Stitch Designer.

## Memo numbers

If required, the Colour Changer positions of yarns can be influenced by using Memo numbers in Stitch Designer. Apart from the Colour Changer needing to be in use, there are certain other factors that will influence how this will work:

- Memo numbers need to be assigned to all the used colors in a pattern. Any number of colors can be in the palette but only colors that are used in the pattern will be taken into account.
- The memo numbers need to be sequential, so if numbers 1, 2 and 3 are used, this will work, if numbers 1, 2 and 4 are used it will not as '3' is missing. At least one of the used colors must have '1' assigned as a Memo.
- If a Colour Changer has 4 positions, sequence numbers of 5 and higher will be ignored.
- If there are only 3 used colors in a pattern memo numbers 1, 2 and 3 should be assigned, regardless of whether the Changer has 4 positions.
- Fair Isle - main yarns will be on selecting needles and will be threaded in the front carriage feeder, while contrast colors will be on deselecting needles and fed through the rear feeder.
- Jacquard - will show the yarn sequence in Stitch Designer (J1, J2 etc.) and the Colour Changer positions (CC1, CC2, CCA, CCB etc.) in Interactive Knitting.
- Right / Wrong side facing texture methods - if Memo numbers are user assigned, all yarns that are used in the pattern, whether they are knitted or used as memo yarns (transparent) must have a number in order for the user allocations to be recognized.

More detailed information and examples of each method are given in the Stitch Designer manual in the Palettes chapter (Memo Numbers).

## Warning messages

Informational messages will be displayed on downloading, printing, checking or knitting the pattern if the Colour Changer settings do not match with the stitch pattern. For example, the message on the right was displayed for a stitch pattern with the Wrong side facing texture method

of knitting and color changes on even numbered rows. After clicking "OK" actions can be taken to correct the settings. For Passap machines, this error message will not happen for stitch patterns with an even number of rows as well as a stitch technique with an even number of lock passes per row. For example, the check will happen for technique 129 on a Passap E6000, which uses a single pass of the lock per row on the screen, but not for technique 130 which uses 2 passes for the same row.

The state of the Colour Changer automatically determines the side of the needle bed at which the first knitting row occurs, and thereby the starting direction - and for those machines that pre-select the needles, the side at which



This pattern has colour changes on even numbered rows (8, 18, 58).

A colour changer has been configured, but it cannot be used for such changes on these rows.

the carriage must start the first pre-selection row. This can affect the stitch layout on gentle slopes (where the slope is more horizontal than vertical) by changing where double row steps occur.

When the Colour Changer is switched from 'off' to 'on' the starting position of the carriage may be changed, and a "*" will appear after the CAR or CAL, which can be seen when accessing *File /*



The starting direction cannot be changed while the colour changer is configured on. Turn off use of the colour changer?

*Integrate* menu option in Stitch Designer. Whether the carriage is on the Left or Right depends on the knitting machine. The "*" appears to indicate that the starting position is determined by the Changer and not the user. When the knitting direction is changed by clicking the CAR* or CAL* button, the message shown here will appear so that the Colour Changer can be switched off if necessary. The same warning will be displayed for pieces with Fair Isle patterns if the starting direction is changed in Original Pattern Drafting by using the Knit Direction Indicator while the Colour Changer is 'on'.

# Cable Links Information

<b>General setup .....</b>	<b>276</b>
<b>Specific Cable Links .....</b>	<b>278</b>
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<b>Magnet Arm .....</b>	<b>284</b>

Cable links are physical connections between a computer that runs DesignaKnit and a knitting machine to enable communication between them. Electronic, manual and punch card knitting machines can all be linked with varying degrees of interactivity. Cable links make it possible to upload and download stitch patterns, and enable Interactive Knitting.

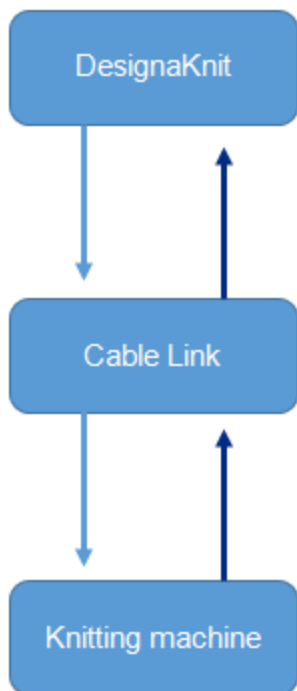
Which cable link can be used depends on the knitting machine as each electronic machine uses its own set of instructions, while manual or punch card machines need a different setup. Soft Byte Ltd can supply cable links to attach to Silver Reed, Brother (Knitking) and Passap (Pfaff) machines as well as to punch card and manual machines.

Electronic knitting machines with their own built in memory can use cable links to transfer stitch patterns. Some knitting machines with their own solutions for memory, such as a PPD (Pattern Programming Device) for Brother or PC10 (Pattern Controller) for Silver Reed can do the same. Knitting machines without memory can still be linked by using a Magnet Arm and KnitLink detector box arrangement to enable Interactive Knitting.

Non-electronic machines can be linked to DesignaKnit using a ScreenLink ([See page 282](#)), which is a Magnetic Switch Link to make use of the Interactive Knitting part of the program.



Soft Byte Ltd can only guarantee the correct functioning of and provide technical support for its own cable links.



The communication between DesignaKnit and the knitting machine can consist of downloading (light blue arrows) and / or uploading (dark blue arrows) stitch patterns. Interactive Knitting is possible in all cases to receive feedback from the knitting machine so that DesignaKnit can provide instructions for the next row of knitting.

Each knitting machine model has its own configuration and needs a specific setup in order to communicate with DesignaKnit. The components that can be involved in each setup are:

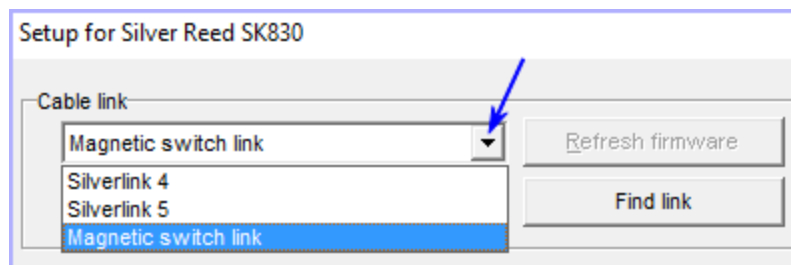
- Cable sets - to physically plug into computer and knitting machine.
- USB converter - Used with all serial cable links on computers that only have USB connectors.
- PPD Adapter - ([See on page 283](#)).
- Knitlink detector box (the small black box with a red spot on it) and Magnet Arm ([See page 284](#)) - Used together to detect the movement of the carriage from the knitting machine in order to exchange information between knitting machine and DesignaKnit to enable Interactive Knitting, even for non-electronic machines.

## General setup

Cable links can be serial or USB. The serial cables are used with a USB Converter ([See page 283](#)) on computers that have only USB ports, which is the case on most all modern computers that use operating systems from Windows XP onwards.

Whether a USB cable link is used or a Serial cable link with a USB Converter, a driver may need to be installed or it may already be installed. Windows is very likely to find this itself if the computer is connected to the internet at the time of plugging in the cable link. Alternatively, the driver may be installed manually. The procedure is described in the documentation that is provided with the cable link.

In both cases the virtual serial port is set up automatically, except for the Serial BrotherLink 1 and 3, which need to be configured manually by going to the Windows Device Manager, finding the correct port number and entering this in DesignaKnit.



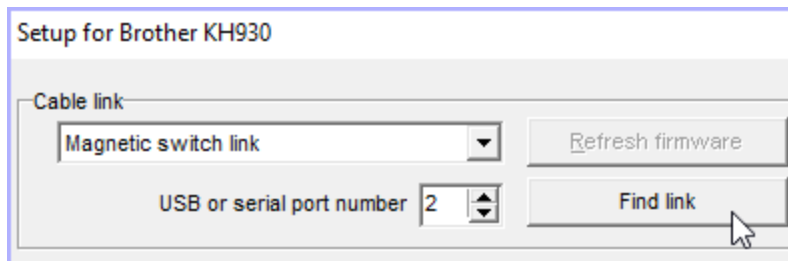
The correct Cable link for the knitting machine can be selected from the drop down list (see blue arrow) in the dialog that is accessed through *Options / Knitting Machine* or *Options / Method of Knitting* in the menus of Original Pattern Drafting, Standard Garment Styling, Stitch Designer or Interactive Knitting.

After clicking on "Setup" in the "Machine Knit Options" or "Select Knitting Machine" dialog the "Cable link" information can be accessed ([See page 121](#)).

If the cable link is listed in the drop down list it can simply be chosen. Alternatively, the "Magnetic switch link" option can be selected. In the example above a Silver Reed knitting machine has been chosen, displaying different possible options in the drop down box.

Serial Cable links that are also Magnetic Switch links can be found by DesignaKnit using the "Find Link" button in the knitting machine Setup.

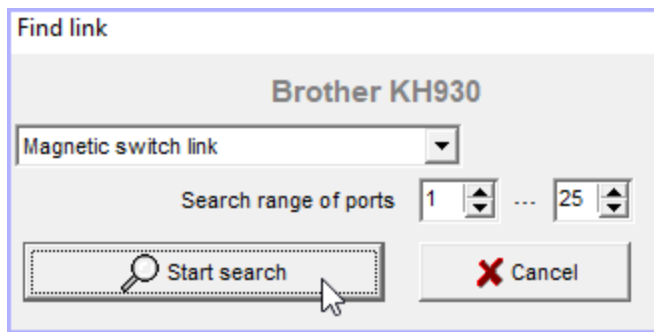
It is important to select the correct type of link as described in the manual for the individual cable link.



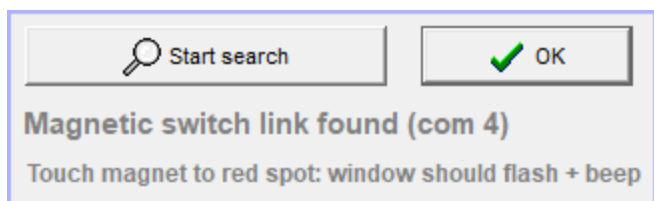
When the link has been selected, the correct "USB or serial port number" needs to be entered. This can be done by clicking the "Find Link" button, which will open a "Search" dialog (see below) in which a range of port numbers to be searched can be specified.

Alternatively, the number can be entered manually by typing it in or by using the up and

down triangles next to the port number.

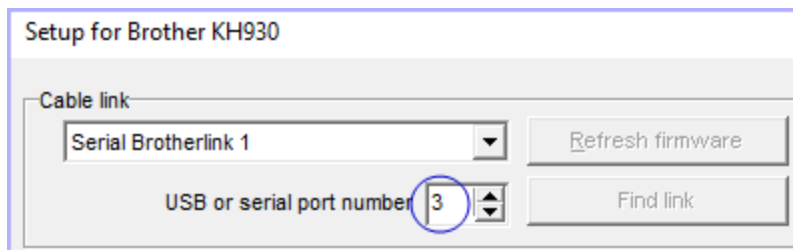


Clicking the "Find link" button opens a dialog in which a range of possible ports can be specified, after which clicking on "Start search" should find the correct port number.



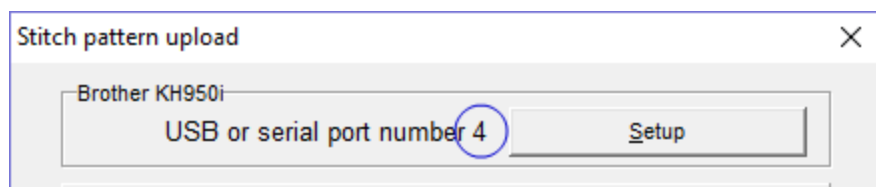
This will be displayed in the same dialog (detail shown on the left), together with instructions if required. The "Cancel" button will have changed to "OK", which can be clicked to proceed.

Once the port number has been found or typed in and "OK" has been clicked DesignaKnit will set the number to match the cable link location and remember this setting for future sessions.



If the port number cannot be detected by the "Find link" procedure, which will happen for the serial BrotherLink 1, serial BrotherLink 3 and Serial E6000 Link 1, the number needs to be identified and entered manually. A message to this effect will appear.

The port number that is used in Windows needs to be entered in DesignaKnit and can be found in several ways, depending on the Windows version. E.g., through Control Panel, System, Hardware or by right clicking 'My computer' (or 'This PC'), Properties (or 'Manage'), Device manager. The USB to Serial converter will be listed as 'USB-to-Serial Port (COMn)' or similar description, where 'n' is a number. This number needs to be entered in the "USB or serial port number" box (see blue circle).



When uploading or downloading stitch patterns in Stitch Designer, the port number can be changed if necessary. This can be done through the *Transfer / Upload*, *Transfer / Download* or *Transfer / Integrated Download* menu options. Depending on which option is

chosen, a list of knitting machines may be presented from which one can be selected, "Setup" clicked and the relevant link and port number selected, or a dialog in which the USB / Serial port number is already presented (see blue circle). This can either be accepted by clicking on the "OK" button lower down in the dialog or "Setup" can be clicked to change it.

If the information is not correct there will be no communication between DesignaKnit and the knitting machine and an error message such as shown here will be displayed.



Port 2 is not available on this computer.

When filled in correctly uploading and downloading of stitch patterns, as well as Interactive Knitting become possible, depending on the capabilities of the knitting machine.

## TIP!

**Soft Byte Ltd** (<https://softbyte.co.uk/cablelinkstroubleshooting.htm>) can be visited for troubleshooting issues with any of the cable links.

## Specific Cable Links

<b>Silver Reed</b> .....	<b>278</b>
<b>Brother</b> .....	<b>279</b>
<b>Passap</b> .....	<b>281</b>

Manuals for all available cable links can be found on **Soft Byte Ltd** (<http://www.softbyte.co.uk/cablelinkmanuals.htm>). Each online manual contains images and a description of the cable link, instructions of how to fit it, how to install and update the drivers and how to use the cable link with Interactive Knitting, as well links to trouble shooting pages.

Tables with the capabilities of each cable link in relation to the relevant knitting machines or devices are provided below, including hyperlinks to the Soft Byte Ltd website documentation. Only the first instance of each link to the website is given.

When a cable link is chosen, the 'Cable link' field ([See page 121](#)) will only provide the relevant options. 'Magnetic Switch link' is included in all cases and is the only option for a number of links. It needs to be selected if a ScreenLink ([See page 282](#)) is used.

### Silver Reed

SilverLink 1 and 2 will only work reliably under Windows 95 and earlier. They are no longer available new and have been superseded by the SilverLink 5.

"SilverLink" is represented by "SL"

SR knitting machines	Cable Link	Upload	Download	Interactive Knitting
SK830 / SK840 / SK860 / SK890 / Knitmaster 550 / 560 / 580	SL4 serial or USB <a href="#">SilverLink 4</a>	No	Yes	Yes
	SL5 USB <a href="#">SilverLink 5</a>	No	Yes	Yes
PE1	SL3 serial <a href="#">Serial SilverLink 3</a>	Yes	Yes	No
	SL3 USB <a href="#">USB SilverLink 3</a>	Yes	Yes	No
	SL3 Plus (USB)	Yes	Yes	Yes

## Brother

"BrotherLink" is represented by "BL"

Brother	Cable Link	Upload	Download	Interactive Knitting
KH270	BL3 USB, requires PPD <a href="#">USB BrotherLink 3</a>	Yes, via PPD	Yes, via PPD	No
	BL3 USB Plus, requires PPD <a href="#">USB BrotherLink 3 Plus</a>	Yes, via PPD	Yes, via PPD	Yes
	BL4 serial	Yes	Yes	Yes
	BL4 USB (Plus) *** <a href="#">USB BrotherLink 4</a>	Yes, via CartUtil	Yes, via CartUtil	Yes
KH900	BL1 serial or USB <a href="#">USB BrotherLink 1</a> <a href="#">Serial BrotherLink 1</a>	Yes, via PPD	Yes, via PPD	No
	BL3 USB Plus + PPD Adapter	Yes, via PPD	Yes, via PPD	Yes
	BL4 USB (Plus) ***	Yes, via CartUtil	Yes, via CartUtil	Yes

Brother	Cable Link	Upload	Download	Interactive Knitting
	BL5 USB <a href="#">USB BrotherLink 5</a>	Yes, via PPD	Yes, via PPD	Yes
KH930	BL1 serial or USB	Yes	Yes	No
	BL3 serial or USB. Both require PPD adapter <a href="#">Serial BrotherLink 3</a>	Yes	Yes	No
	BL3 USB Plus Requires PPD Adapter	Yes	Yes	Yes
	BL5 serial or USB	Yes	Yes	Yes
KH940; KH950i	BL1 serial or USB	Yes	Yes	Yes*
	BL3 serial or USB or USB Plus All require PPD adapter	Yes	Yes	Yes
	BL5 USB	Yes	Yes	Yes*
KH965	BL3 Plus USB, requires PPD	Yes, via PPD	Yes, via PPD	Yes
	BL4 serial	Yes	Yes	Yes
	BL4 USB (Plus) ***	Yes, via CartUtil	Yes, via CartUtil	Yes
KH965i	BL1 USB	Yes	Yes	No**
	BL2 Serial Superseded by the USB Brother-Link 5	Yes	Yes	Yes
	BL4 serial	Yes	Yes	Yes
	BL5 serial or USB	Yes	Yes	Yes
KH970	BL1 USB	Yes	Yes	No**
	BL2 Serial	Yes	Yes	Yes
	BL3 USB Plus Requires PPD Adapter	Yes	Yes	Yes
	BL4 serial	Yes	Yes	Yes

Brother	Cable Link	Upload	Download	Interactive Knitting
	BL5 serial or USB	Yes	Yes	Yes
PPD with CK35 cartridge or cartridge III in KH900 mode	BL1 serial or USB	Yes	Yes	No
	BL3 serial or USB Both require PPD adapter	Yes	Yes	No
	BL3 USB Plus Requires PPD Adapter	Yes	Yes	Yes
	BL5 USB	Yes	Yes	Yes
PPD in mode for KH270, KH930, KH930M, KH940, KH950i, KH965, KH965i, KH970	BL1 serial or USB Both require PPD Adapter	Yes	Yes	No
	BL3 serial or USB	Yes	Yes	No
	BL3 USB Plus	Yes	Yes	Yes
	BL5 USB + PPD Adapter	Yes	Yes	Yes

* The KH940 and KH950i have a KC setting on the carriage. Brother intended this to allow for choosing between plain and pattern knitting. For BrotherLink 1 users who want to do Interactive Knitting it is necessary to use the KC setting, even for plain knitting, for which a blank pattern has to be downloaded.

** With the addition of a Magnet Arm ([See page 284](#)), the BrotherLink 1 USB is converted to a BrotherLink 5 USB, enabling Interactive Knitting on these machines.

*** The USB BrotherLink 4 (Plus) is also referred to as the Cartridge Cable. It is necessary to use the CartUtil program to download, although the file that is downloaded is prepared by DesignaKnit.

## Passap

All versions of the Passap cable links are treated as Magnetic Switch Links, including the USB E6000Link 1, which is not supplied with the Magnet Arm. DesignaKnit can detect the port number automatically by clicking on the "Find Link" button ([See page 277](#)).

Passap	Cable Link	Upload	Download	Interactive Knitting
E6000	E6000Link 1 serial <a href="#">Serial E6000Link 1</a>	No	Yes*	No
	E6000Link 1 USB <a href="#">USB E6000Link 1 &amp; 2</a>	No	Yes*	No
	E6000Link 2 serial <a href="#">Serial E6000Link 2</a>	No	Yes*	Yes
	E6000Link 2 USB	No	Yes*	Yes
E8000	E8000Link <a href="#">USB E8000Link 1 &amp; 2</a> <a href="#">Serial E8000Link 1 &amp; 2</a>	No	Yes	Yes
Duomatic 80 punch card machine	ScreenLink <a href="#">USB ScreenLink</a> <a href="#">Serial ScreenLink</a>	No	No	Yes

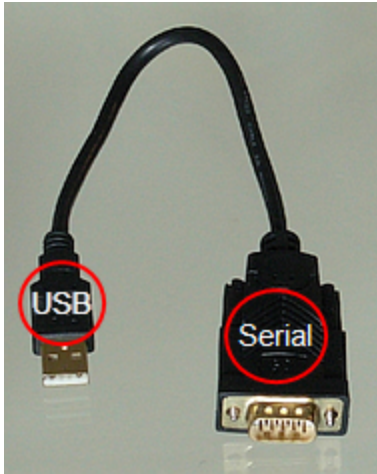
* Only later or updated models of the E6000, with the correct chip set ([See page 261](#)), can accept downloads.

## ScreenLink



This cable link is available in ([USB](#)) and serial ([Serial](#)) versions and enables Interactive Knitting for almost any knitting machine, although it does not allow uploading to DesignaKnit or downloading to the knitting machine. The "Magnetic switch link" option has to be selected in the Knitting Machine Setup ([See page 121](#)) in order to make use of this link.

## USB Converter



From DesignaKnit 9 onwards, all serial cable links use a USB Converter to connect to a USB port on the computer.

A USB converter is needed in cases where the cable link has a serial connection and the computer only has USB ports. Where more than one knitting machine is present, the USB to serial converter can be switched from one machine to the other as needed, so providing a more economical use of existing (older) serial cable links.

The USB to Serial Converter as supplied by Soft Byte Ltd is suitable for the following serial links: BrotherLink 1, BrotherLink 2, BrotherLink 3, BrotherLink 4, BrotherLink 5, Passap E6000 Link 1, Passap E6000 Link 2, Passap E8000 Link, ScreenLink and SilverLink 3.

It is not suitable for use with the discontinued SilverLink 1, SilverLink 2, Superba electronic link and Singer Link.

The 'Serial' end plugs into the serial cable link while the 'USB' end plugs into a USB port on the computer. The USB Converter needs to be installed as described in its manual in order for it to be recognized by the knitting machine.

The USB Converter that is supplied by Soft Byte Ltd has been specifically selected to work well with the DesignaKnit serial cable links. Although other USB to serial converters can be obtained, it is highly recommended to purchase a Soft Byte Ltd USB Converter as the cable link serial ports are not standard and this converter has been thoroughly tried and tested with the appropriate DesignaKnit cable links.

A link to the latest driver for the USB Converter can be found on [Soft Byte Ltd](https://www.soft-byte.co.uk/usbconverter.htm) (<https://www.soft-byte.co.uk/usbconverter.htm>). More information can also be found on [USB Converter](http://soft-byte.co.uk/CableManuals/USBtoSerial.pdf) (<http://soft-byte.co.uk/CableManuals/USBtoSerial.pdf>).

Converters other than the Soft Byte Ltd supplied ones cannot be supported.

## PPD Adapter



This is a short cable which attaches to the small 8-way connector end of the USB or Serial BrotherLink 1, the USB or Serial BrotherLink 3 or the USB BrotherLink 5 and extends the capabilities of these cables in a cost-effective way if there is more than one kind of Brother machine or PPD to be worked with.

The possible combinations are listed below.

- Serial BrotherLink 1 converts to & from Serial BrotherLink 3
- USB BrotherLink 1 converts to & from USB BrotherLink 3
- USB BrotherLink 5 converts to & from USB BrotherLink 3 Plus

Either the real BrotherLink 1 (serial or USB) or the USB BrotherLink 5 needs to be used for downloading to the PPD in KH900 or CK35 mode, or its converted form in the shape of a BrotherLink 3 (serial or USB) with a PPD Adapter.

For other PPD modes it is necessary to use a real serial BrotherLink 3, USB BrotherLink 3 or USB BrotherLink 3 Plus or its converted form in the shape of a BrotherLink 1 (serial or USB) or the USB BrotherLink 5 with a PPD Adapter.

More information about the PPD Adapter can be found on [Soft Byte Ltd](http://soft-byte.co.uk/CableManuals/PPDAdapter.pdf) (<http://soft-byte.co.uk/CableManuals/PPDAdapter.pdf>).

## Magnet Arm



Large Magnet Arm



Small Magnet Arm



Magnet Arm for Lace Carriage



KnitLink box platform



Magnet Arm for USB Cable links

Magnet arms, see also [Soft Byte Ltd](https://www.softbyte.co.uk/magnetarms.htm) (<https://www.softbyte.co.uk/magnetarms.htm>), are supplied as standard with a number of cable links and can be purchased as an optional extra with others. A Magnet Arm and Knitlink box combination enables Interactive Knitting for electronic as well as non-electronic knitting machines. The different types are shown in the image on the left.

The 'large' black plastic arm is supplied with serial cable links and the 'small' one was previously supplied with some discontinued serial BrotherLink cable links to attach to Brother carriages with a KnitLeader tripper arm.

Where a small black plastic Magnet Arm is used it needs to be pushed onto the KnitLeader tripper on the left hand side of the carriage. If the rubber tube holding the magnet has a hole, the KnitLeader tripper needs to be pushed through this to stay in the 'Up' position. If there is no hole the empty end of the tube is pushed over the tripper arm and the tripper moved down into the working position. USB cables are supplied with a Magnet Arm that attaches directly to the

carriage and can be adjusted so it lines up with the KnitLink box. During knitting the tripper must be in the 'Down' (working) position to keep it out of the way of the KnitLink box.

Both the 'large' and 'for lace carriage' types are slightly flexible in the middle to allow precise positioning. The black type of plastic Magnet Arm can be bent into the right position, using pliers if necessary.

The 'lace' Magnet Arm is used on Brother (except the KH940 and KH950i when used with a BrotherLink 1) and Toyota machines. The additional Magnet Arm attaches to the lace carriage.

The metal Magnet Arm is supplied with USB cable links. The screw fixing makes it easy to adjust to any carriage. It can be used in place of any of the other Magnet Arms.

The KnitLink box platform is required with the Silver Reed 360, 370, 700, Zippy with KnitRadar and the Passap / Pfaff Duomatic (punch card) because there is no convenient place on the knitting machine to place the KnitLink box. Instead, the box must be placed on a small platform that attaches to the yarn mast.

# Tutorials

[All Video Tutorials](#)

[Standard Garment Styling Tutorials](#)

[Original Pattern Drafting Tutorials](#)

[Stitch Designer Tutorials](#)

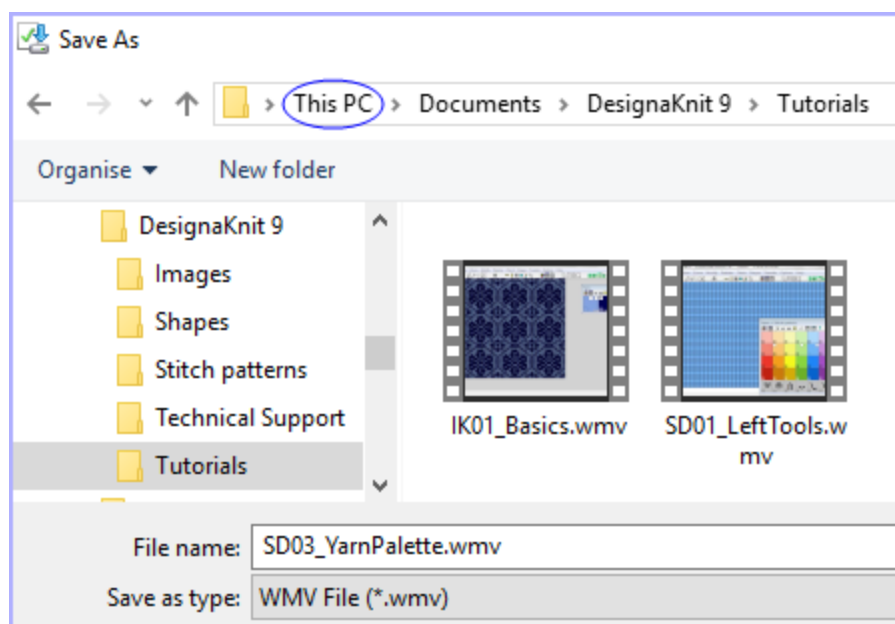
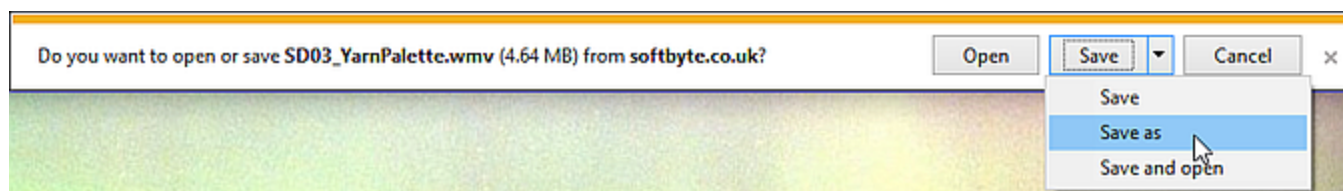
[Interactive Knitting Tutorials](#)

[DesignaKnit Graphics Studio Tutorials](#)

A number of video tutorials is provided on the Soft Byte Ltd website and can be accessed by using the links provided above or from the *Help / Tutorials* menu option. Either way, the Soft Byte Ltd website will be opened in Internet Explorer or the default web browser from where individual Tutorials can be accessed.

If the links shown above are used, the Tutorial that is accessed will be saved to the user 'Downloads' folder on the computer without further prompting, after which it will be opened directly in the browser. The downloaded file(s) can be picked up from the Downloads folder to be opened or saved to a different location at some point. The "All Video Tutorials" link accesses the main page to select tutorials in any of the sections of DesignaKnit 9, while the other links will go to directly to the relevant tutorials for each specific section.

If *Help / Tutorials* is used instead, Internet Explorer will open and an Options bar as shown below will appear in which the next action can be chosen for the selected tutorial file.



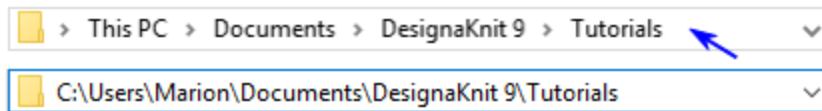
Clicking on 'Open' will open and play the tutorial file directly.

The 'Save' option offers three choices when the drop down triangle is clicked as can be seen above. Both 'Save' and 'Save and open' will save the file in the user "Downloads" folder. The second option will then open and play the tutorial.

'Save as' will open a Windows Explorer window like the one shown on the left to allow the file to be saved at a chosen location, from where it can be opened.

The files are downloaded and saved in a *.wmv (Windows Media Video) format which can be opened in

different viewers, such as Windows Media Player, Films & TV, Winamp etc. Double clicking the file will open whatever default Windows application has been set, while Right clicking allows a different, preferred application to be used.



The actual path of "This PC" (see blue oval in the image above) is shown only when the name bar is clicked on (see blue arrow on the left), which will reveal the complete path to the location.

It is recommended to create a dedicated Tutorials folder in the Users \<username> \DesignaKnit 9 folder ([See page 186](#)) in order to keep all Tutorials files together, as has been done in this example. This will facilitate accessing as well as managing backup of all DesignaKnit user files.

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# Credits

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<b>Silverlink 5 design &amp; firmware</b>	Justin Bernard / Davlec Ltd.
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