

The DesignaKnit Serial Brotherlink 3

For the Brother PPD



What this link does

- Uploading and downloading patterns between DesignaKnit and a PPD cartridge in the modes for KH270, KH930, KH940, KH950i, KH965, KH965i, and KH970, and for uploading from the Stitch Pattern Extras Cartridge.
- If used in conjunction with an optional PPD Adapter, it is also suitable for use with the PPD modes for KH900 and CK35. It can then also connect direct to the KH930, KH940, and KH950i machines without using a PPD. When the PPD Adapter is added, the Serial Brotherlink 3 cable effectively becomes converted to a Serial Brotherlink 1 cable, when the instructions for the Serial Brotherlink 1 should be referred to instead of this document. See <https://softbyte.co.uk/cablelinksbrother.htm> for the PPD Adaptor and <https://softbyte.co.uk/cablelinkmanuals.htm> for all our cable link manuals.

Fitting the link to the computer & PPD

This cable may be used with a DesignaKnit USB-to-serial converter. Other converters might not work because the PPD was not designed to connect to computers. If using a converter, install it

first, referring to its own manual, which is available here:

<https://softbyte.co.uk/cablelinkmanuals.htm>

Connect the Brotherlink to a free serial port on your computer or to a USB-to-serial converter. If the BrotherLink has a 25 pin connector, use a 25 to 9 serial adapter.

Connect the cable to the 8-way FB100 connector on the PPD.

Excess cable should not be tightly coiled as this can cause electromagnetic effects that can interfere with the operation of the link.

Telling DesignaKnit 7, 8, or 9 which cable and port number to use

This applies whether you are using a true serial port or a USB to serial converter.

1. The automatic detection doesn't support this type of cable link. Please see <https://softbyte.co.uk/usingdevicemanagertofindport.htm> for instructions on how to find the port number using Device Manager. This applies whether using a USB to serial converter or a true serial port.
2. Open DesignaKnit, open Stitch Designer and select Transfer / Upload.
3. Select the PPD for the required knitting machine from the knitting equipment list by left clicking it, then click the Setup button.
4. (In DesignaKnit 8 and later versions, under Link or Cable link, it doesn't matter which type of cable is selected.)
5. At the top of the Knitting Machine Setup dialogue box there is a place to enter the port number. Enter the port number that was found in Device Manager and click OK.
6. When back at the list of knitting equipment, finish by clicking Cancel.

Upload, Extract, & Restore

These features are available from the Transfer menu in Stitch Designer.

In Stitch Designer, Transfer / Upload transfers all 900 series patterns from the PPD cartridge to DesignaKnit, in a single batch. After uploading the batch of patterns, DesignaKnit requests a filename for the batch, which is stored with the filename suffix .bro. If there are 900 series pattern numbers in the PPD cartridge that you want to keep and are not already in DesignaKnit, they can be uploaded and stored on the computer.

The **Extract** option on the Transfer menu can then be used to extract individual patterns from the stored .bro file and save them on your hard disk as DesignaKnit stitch pattern files.

The **Restore** option takes a previously uploaded .bro file and downloads it back to the PPD, thereby restoring the 900 series pattern numbers that were in the cartridge at the point at which the batch was uploaded to the computer.

Downloading an Unintegrated Stitch Pattern

1. In Stitch Designer, open the stitch pattern you want to download to the PPD and select Transfer/Download.
2. At the list of knitting machines, make sure that the Brother PPD for the required knitting machine is highlighted and click OK.
3. The "Assemble Batch of Patterns" dialogue opens. Use the Help button if necessary to find out how to assemble the required batch of patterns. Note the 900 series pattern number that gets assigned to each stitch pattern in the batch, starting at 901 - these numbers will be required later. When the required batch of patterns has been specified select OK.

4. Connect the cable link's 8-way connector to the FB100 connector on the PPD, and the USB connector to a computer USB port.
5. Click the Download button in the next dialogue and follow the on-screen instructions. A bar indicates the progress of the download.

Downloading an Integrated Stitch Pattern

An integrated stitch pattern is one which has been positioned on a garment piece, either by dragging the outline of the garment piece over the stitch pattern in Stitch Designer, or by dragging the stitch pattern over the garment piece in Original Pattern Drafting. The filename and position of a stitch pattern may be stored independently for each piece in a shape file.

Whichever way a garment piece is integrated with a stitch pattern, it is unlikely that row 1 of the garment piece will end up coinciding with row 1 of the repeating stitch pattern unit as shown on the Stitch Designer screen. It is also unlikely that the centre stitch of the garment piece will coincide with the centre stitch of the repeating pattern unit, though the interactive knitting instructions include centring each garment piece on the needle bed. DesignaKnit manages this situation by automatically shuffling the pattern vertically and horizontally by the required number of rows and stitches before downloading it. The end result is that the knitted piece exactly matches the display of the integrated piece on the Stitch Designer or Original Pattern Drafting screen.

In Stitch Designer, when Transfer / Integrated Download is selected, a garment piece is first chosen. The stitch pattern that has been integrated with that piece is then downloaded to the PPD cartridge memory, correctly positioned at the centre of the needle bed.

Even if the same stitch pattern has been integrated with more than one garment piece, the positioning of the pattern on each piece is likely to vary, so the automatic shuffling of the pattern will be different, and a separate download is required for each piece.

The garment shaping cannot be transferred to the console memory: only the stitch pattern can. The process is as follows.

1. In Stitch Designer, open the shape file that has been integrated and select Transfer / Integrated Download.
2. At the list of knitting machines, make sure that the Brother PPD for the required knitting machine is highlighted and click OK.
3. The Integrate window opens. In the left column, select the required garment pieces. The filenames of the stitch patterns that have been integrated with the selected pieces should be shown in the middle column. For knitting machines other than the KH965i and KH970, note the 900 series pattern number that has been assigned to each integrated garment piece, starting at 901 - these numbers will be required later. Click OK.
4. Connect the cable link's 8-way connector to the FB100 connector on the PPD, and the USB connector to a computer USB port.
5. Click the Download button in the next dialogue and follow the on-screen instructions. A bar indicates the progress of the download.

Large patterns

Different PPD modes have different sized memory pages. Each page is the same size as the knitting machine(s) that the mode relates to. The memory space required for a given pattern is roughly proportional to the total number of stitches. For a given batch of patterns DesignaKnit is able to calculate whether the total memory required for the batch will fit into a PPD memory page. If there is insufficient memory a message is shown - and some patterns will have to be removed from the batch.

It is also possible that one large pattern is too large for the PPD memory page - in which case DesignaKnit will give a message saying how many sections it must be divided into and asking which of those sections you want to download. Dividing into sections is done automatically - you do not have to decide how to divide the pattern. When a section number is chosen, a message shows how many rows must be knitted before the next section needs to be downloaded.

Preparing to knit

Before knitting, remove any cable link from the knitting machine's FB100 socket, in case the carriage snags the cable and causes damage to either the socket or the cable.

This cable link does not support Interactive Knitting. If Interactive Knitting is required, the USB Screenlink enables interactive knitting on almost any knitting machine. Or without using a cable link, Interactive Knitting may be followed using the arrow keys to progress through the work.

Whatever the model of Brother electronic knitting machine, it is necessary to select the pattern number on the knitting machine console. The downloaded pattern number will be in the range 901 to 998. For the KH900, KH930, KH940, and KH950i, the pattern numbers will be the same as they appeared in DesignaKnit and in the PPD, because an entire batch is downloaded together in one operation with the pattern numbers already defined.

For the KH965i and KH970, patterns are loaded from the PPD cartridge into the machine one by one - by specifying the number that a pattern has in DesignaKnit and in the cartridge. The knitting machine then assigns its own 900 series numbers - it gives the next available 900 series number to each pattern, so they are likely to end up with different numbers from those shown in DesignaKnit earlier.

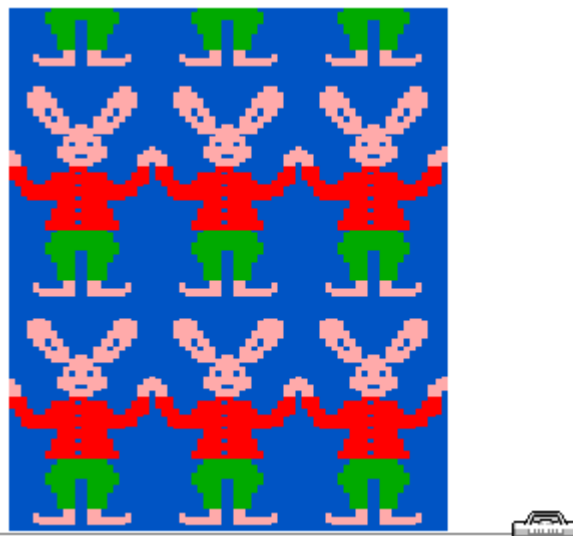
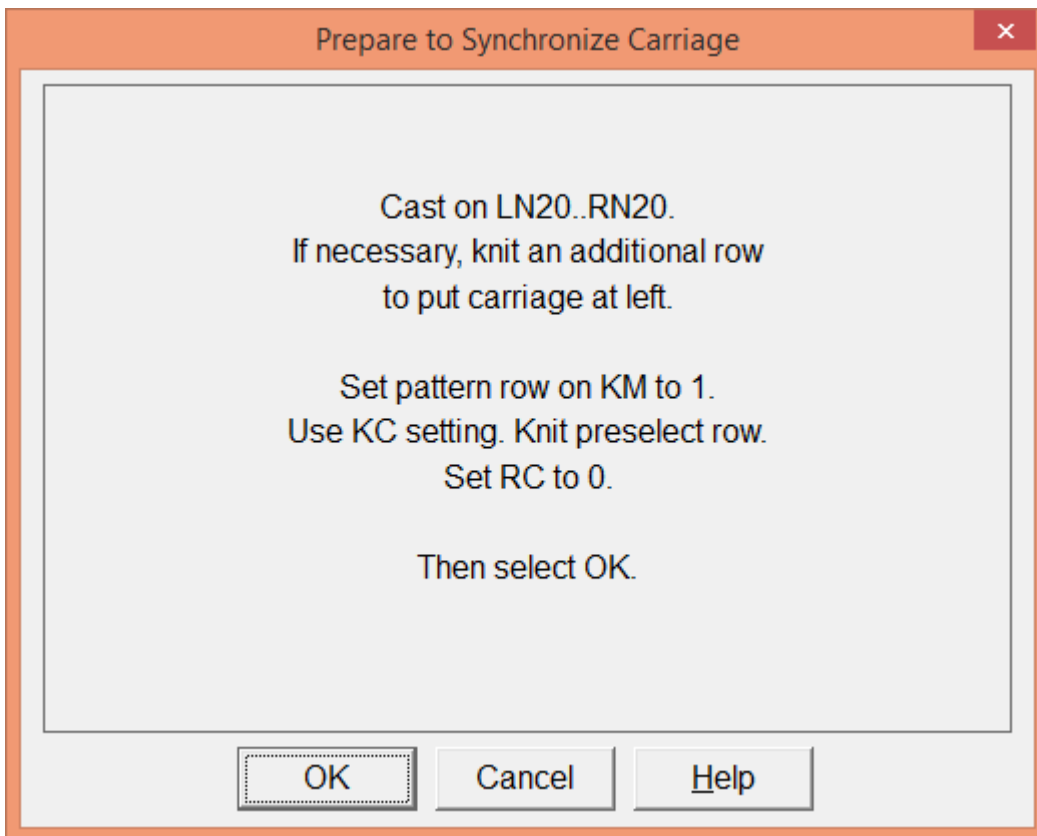
For the KH965i and KH970 care must be taken to delete other 900 series patterns periodically, or before downloading a particularly large pattern. When working out if a pattern will fit into the machine memory, DesignaKnit assumes that no other patterns are using up memory. For other models of machine, all other 900 series patterns are automatically replaced by the new batch of downloaded patterns so there is no need to delete anything.

When doing plain knitting without using a cable link for interactive knitting, the KC setting on the carriage is not used. For pattern knitting, a KC setting must be used.

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.

Preselection

Except when using the garter carriage, Brother knitting machines preselect needles for the following pass of carriage. Each pass of the carriage knits the pattern that was defined by the previous pass, and also selects needles for the following pass. When the amber traffic light button is clicked to prepare to start knitting, the following dialogue appears:



Note that in this example, the Progress window at the top right of the Interactive Knitting screen shows the carriage at the right hand side of the work. The instructions are saying to work the first preselect row starting with the carriage at the left - so that it will be at the right when starting to knit row 1. ***The interactive knitting screen always shows the row that is about to be knitted, not the row that is about to be preselected.***

Troubleshooting

For problems uploading or downloading, please see <https://softbyte.co.uk/uploading&downloadingwithbrotherlinks.htm>

For problems with interactive knitting, please see <https://softbyte.co.uk/interactiveknittingwithbrotherpassapscreenlinks.htm>

Updates to this manual

The document you are reading was updated in December 2021.

The most recent editions of cable link manuals may be found at <https://softbyte.co.uk/cablelinkmanuals.htm>

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