

The SilverLink 5

For Silver Reed & Knitmaster electronic machines

This document can be downloaded as a PDF from softbyte.co.uk/cablelinkmanuals.htm



This cable link enables DesignaKnit to control interactive knitting on the Silver Reed modular electronic knitting machines SK830, SK840, SK860, & SK890, and also on the Knitmaster 550, 560, and 580 machines.

The Knitmaster 500 can also be used if connected with the SK500x adaptor.

Neither the EC1 nor PC10 are required for knitting with this Silverlink, but a curl cord is required. The curl cord is not included with this link.

This link can be used with the normal carriage, the electronic lace carriage, or the AG50 intarsia carriage.

No separate stage of downloading a pattern has to be managed by the user: downloading happens automatically when starting to knit.

Part List

1. The metal Silverlink box.
2. A power supply unit.

3. A mains plug for the power supply unit.
4. A USB connecting cable.

Fitting the cable

Attach the mains lead to the power supply unit and plug into the mains power supply. The thin cable which is permanently attached to the power supply unit terminates in a small jack plug which attaches to the Silverlink box. The straight end of the curl cord of the knitting machine connects to the female DIN socket on the Silverlink 5.

Connect the square end of the USB lead to the socket next to the power inlet on the Silverlink box, and connect the flatter rectangular end to a standard USB port on the computer.

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

Installing the Driver

The process varies according to the version of Windows and whether the same driver already happens to be installed for a similar device. All the DesignaKnit cable links, and many other devices use the same driver.

Installing the driver should be done by an Administrator Windows user. If your computer doesn't offer you a choice of user names when starting up, it almost certainly means you are an Administrator user.

Insert the USB cable into a standard USB port on your computer. Windows will recognize that the cable link has been attached and may show a message saying that it is searching for a driver. A message may appear to say that devices are being installed or it might say that the best driver is already installed. If Windows requests the driver, follow one of these options:

- If your computer has a RISC or ARM processor, refer to the topic at the bottom of this webpage: <https://softbyte.co.uk/cablelinksdriver.htm>.
- For Windows CE, download the driver from <http://www.ftdichip.com/Drivers/VCP.htm>;
- For other computers and other versions of Windows download the driver from here <https://softbyte.co.uk/download/DKdrivers.zip>

When Windows requests the driver, select the file you have downloaded. Finally Windows may ask you to restart the computer - if so, do it.

If your DesignaKnit computer is **not** connected to the internet, copy the downloaded file onto a USB drive or other removable media and transfer it to the DesignaKnit computer.

If the driver does not appear to have installed correctly, see the Troubleshooting section at the end of this manual.

Telling DesignaKnit which cable & port number to use

For DesignaKnit 7, it is important to use the final program update for this cable link. The latest DesignaKnit 7 release is available here: <https://softbyte.co.uk/dk7updates.htm>

1. Open Interactive Knitting and close the opening dialogue. Select Options / Knitting Machine.
2. At the list of knitting machines, highlight the required Silver Reed electronic machine by left clicking it, then click the Setup button.
3. Make sure that the SilverLink 5 is powered on and that the green LED is on, and that it is connected by USB cable to your computer.

4. **For DesignaKnit 7 only:** Tick the "Use Silverlink 5" option and click the "Find SilverLink 5" button.

For later versions: Under Link or Cable link, select "Silverlink 5" and click the Find Link button.

5. When DesignaKnit finds the port number it will automatically enter that number into Knitting Machine Setup. If it reports that the link was not found, go to the section titled Troubleshooting for information about updating the driver.
6. Click OK and OK again. When back at the list of knitting equipment, finish by clicking OK.

If the link was detected, DesignaKnit will now automatically copy the SilverLink 5 port number setting to all Silver Reed electronic machines on the list in the Knitting Machine Selection dialogue. It is therefore not necessary to repeat this process for any other Silver Reed machines.

Interactive Knitting with the SilverLink 5

When entering the Interactive Knitting section of DesignaKnit, there is an opening dialogue that invites knitting either a shape or a stitch pattern.

Knitting a piece from a shape file

If you select a shape file from the opening dialogue or from the menus, and then a garment piece, you then may have a choice about whether to knit only the shape, or the integrated piece. If the integrated piece is offered, it means that the pattern that has been positioned on the 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. If knitting an integrated piece, the stitch pattern is used to control needle selection for any of the machine knitting methods of knitting. Whether integrated or not, shaping instructions are given while you knit.

Knitting a stitch pattern swatch

If you select a stitch pattern from the opening dialogue or from the menus, this will prepare an unintegrated swatch without a garment shape, and the number of stitches and rows to knit will be requested. If you enter a number of stitches that is at least one horizontal pattern repeat, the pattern will then be replicated automatically as required, across the full width of the needle bed if necessary.

Starting to knit

The real carriage must be on the same side as the on-screen carriage in the top right window. In DesignaKnit 8 and 9, the on-screen carriage starting position is controlled as follows. If the colour changer is configured on, it is set to the side required by the colour changer. Otherwise: if knitting a swatch, it is controlled by the option "Start swatch with CAL" in knitting machine setup; if knitting an unintegrated piece it is controlled by the "Shape Only" settings that are on the Options menu; if knitting an integrated piece, it is controlled by either of the following – the CAL option in the Integrate dialogue (in Original Pattern Drafting or Stitch Designer), or by Original Pattern Drafting's knit direction indicator.

Click on the amber traffic light button for cast-on and/or welt instructions and click on OK when ready to proceed.

A pop-up dialogue gives instructions for the starting positions of the point cams. These starting positions are defined by the width of the swatch or the maximum width of the garment piece, and the knitting is centred on the needle bed. You can control the patterning area by moving the point cams – see the sections on **Adjusting the point cams during knitting** and **Lace Knitting**

below for more information. The N1 cam is not used when knitting with a Silverlink 5. When you are ready to proceed, click OK.

Silver Seiko knitting machines that were made for the Japanese domestic market (rather than the international export market) require two N1 cams to be used in place of the two point cams; no point cam is required.

The pattern is automatically downloaded to the SilverLink box before beginning to knit and remains in its memory until the next pattern or section of pattern is downloaded. The time taken to download a pattern depends on its size and complexity.

Large patterns are downloaded and knitted in sections - see details below under Large Patterns. The process is fairly seamless and when it is necessary to download the next section of a large pattern, a progress bar will appear for a few seconds or longer, indicating that the download is taking place. Wait until it completes before continuing to knit.

When a stitch pattern rather than a shape file has been selected, the carriage passes for a single repeat of the pattern will be downloaded, so for a small pattern repeat this may only take a few seconds. When you knit, however, the pattern will repeat horizontally and vertically as necessary.

When selecting an integrated shape, the download will consist of the number of carriage passes required to work the whole garment piece, regardless of the size of the single pattern repeat, so downloading could take considerably longer. In the case of an extremely large jacquard pattern, for instance, or lace, this could require a greater number of carriage passes than the maximum that the memory can hold, so the pattern will be downloaded in sections, as described below under Large Patterns.

When selecting shape-only, data representing a blank pattern will be downloaded in order to prevent needles from selecting.

Please wait until the download progress bar completes before beginning to knit.

Large Patterns

The SilverLink 5 can hold data for approximately 16368 carriage passes (if the downloaded pattern is no more than 64 sts) or 8184 passes (if no more than 144 sts), otherwise 4092 passes. The number of carriage passes necessary to complete a row of lace knitting, or a pair of Jacquard rows, contributes to this total. An exceptionally large pattern that requires more passes than this maximum figure will be downloaded in sections. The second section of a large pattern will automatically download after the first section has been knitted, and so on. The countdown that is displayed in the Countdown and Shaping Instructions window will arrive at zero at the row where one section has been knitted and an automatic download will then begin. The countdown is there to warn you to stop knitting when it reaches zero, because something is about to happen – in this case a download. Stop knitting until the download is complete. (The countdown also reaches zero where shaping needs to be done or there is a colour change instruction.)

Adjusting the point cams during knitting

You can adjust the distance that the carriage must move across the bed, by manually moving the point cam that is further from the carriage. By keeping the point cams fairly close to the worked needles, the movement of the carriage can be kept to a minimum. This adjustment of point cams can be done at any row. However, the point cam that is nearer the carriage must never be moved, or the pattern will shift sideways.

The further point cam should not be moved outwards beyond its initial starting position, unless the number of stitches in the stitch pattern is less than or equal to the number of needles selected by the original position of the point cams.

Also, make sure that at each row there are no needles in working position outside the point cams.

Lace Knitting

The Silver Reed knitting machine manuals give the instruction to move the point cams 2 needles inside the edge of the work when knitting lace. This is in order to prevent lace transfers from extending across the edges of the work. Please ignore that instruction: when using a Silverlink 5 it would cause the pattern to shift sideways. DesignaKnit's Interactive Knitting screen may show lace transfers extending right to the edges of the work, but needle selection is nevertheless automatically adjusted so that neither of the two needles inside each edge of the work are selected. This provides a plain border of two stitches at both sides.

Pausing during Interactive Knitting

If you stop knitting you can later automatically carry on from where you left off. When you click the red traffic light button, or go to another section of DesignaKnit, your place in the knitting will be remembered. After stopping knitting, you can close down Windows and turn the Silverlink power off without losing your place. Do not disconnect the Silverlink or turn off its power supply until you have stopped the knitting process by clicking the red traffic light or pressing the Esc key. If the Silverlink is disconnected before the red traffic light is clicked, Windows can make the Silverlink port unavailable for a while and DesignaKnit may stop working until the computer is restarted.

DesignaKnit keeps a separate note of where you have got up to for each knitting machine, so you can knit different pieces on different machines without needing to finish one piece before starting another.

If you need to unravel any rows, stop the knitting process by clicking on the red traffic light. Reset the row counter in DesignaKnit using for example the down arrow key, making sure that when you restart knitting the real carriage is on the same side as the on-screen carriage. The SilverLink 5 will comply with the change without having to download the pattern again. Click the green traffic light and click OK for the point cam positions and start knitting again.

SilverLink 5 LEDs

The power indicator will remain green as long as the SilverLink 5 is powered on. During knitting, the red LED will come on each time a needle is deselected. Its purpose is purely diagnostic and in normal circumstances it is not necessary to take note of its condition.

Safety

Please make sure that while knitting, the Silverlink is not covered. This is so that the heat that it generates can dissipate.

Do not leave the Silverlink's power supply unit connected to the domestic electricity supply unnecessarily for long periods when you are not knitting: please turn off at the wall switch. Apart from being good safety practice, this will prolong the life of the power supply unit and Silverlink, as well as saving power.

Updating the Driver from the Internet

From time to time the manufacturer of the chips in the cable link publishes a new driver because a modification may be necessary for it to work with newly published Windows updates. We

recommend that from time to time you follow the instructions on this webpage to keep the driver updated. If you have a problem with the cable link at any time it is a good idea to update the driver before contacting technical support. <https://softbyte.co.uk/updatinganexistingdriver.htm>

Troubleshooting

- If Windows reported a problem when trying to install the driver from the internet, or Device Manager shows a yellow error icon next to the serial port, or there is a yellow error icon next to an "Unknown device", follow the instructions at <https://softbyte.co.uk/cablelinksdriver.htm>.
- If your DesignaKnit computer is not connected to the internet, download a driver installer from this web page and transfer it on a pen drive to the DesignaKnit computer: <https://softbyte.co.uk/cablelinksdriver.htm>.
- Updating the cable link driver: please see <https://softbyte.co.uk/updatinganexistingdriver.htm>
- While interactively knitting, a message sometimes appears saying that the carriage has moved in the wrong direction, when it has not. Please see this webpage: <https://softbyte.co.uk/carriagedirectionerrorswithsilverlinks.htm>
- The stitch pattern on the knitted work is not the same as the pattern on the interactive knitting screen. Please see this webpage: <https://softbyte.co.uk/mispatterningwithsilverlinks.htm>

Updates to this manual

The document you are reading was updated in October 2024.

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

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