## Debian Swirl Socks

A PanikSchaf-Sock-Design



In late summer 2018 I knit a tunic featuring a yoke with flower or spiral motifs. The spiral motifs inspired me to change them into Debian Swirls, because this is the beautiful logo of the debian project, my favourite linux distribution:
Debian - The universal operating system (www.debian.org).
So I sat down to convert the logo into a matching knitting pattern. Later that day I realised it was Debian's 25th birthday and immediately decided to write a sock design with a Debian Swirl on the side of the leg (and optionally on the back of the foot aswell).


In the first version of the pattern, the swirls were being purled on a stockinette background. This second version now includes instructions for knitting colourwork swirls with a technique called intarsia in the round. It will be released on July 6th to celebrate the release of Debian 10 - codename Buster.
All versions are distributed freely to live up to the idea of free and open source. If you are interested in the source code of either the pattern or the swirl chart, just send me an e-mail.

## Ingredients for a pair of socks EU size 36-47

* approx. 70 g to 95 g sock yarn with a meterage of about $420 \mathrm{~m} / 100 \mathrm{~g}$ : approx. 70 g for size $36 / 37,75 \mathrm{~g}$ for size $38 / 39, \ldots$ and 95 g for size $46 / 47$ as main colour (MC).
* for the colourwork: approx. 5 g red-pink sock yarn as contrast colour (CC)
* double pointed needles size 2 mm (or matching your gauge)
* darning needle for weaving in yarn ends


## 1 Gauge

The gauge can be taken from the ribbing. If it fits, you can just continue knitting... ©. In ribbing pattern, 30 sts very slightly stretched give 10 cm in width and 12 rounds 3.5 cm in height.

## 2 Remarks

Size: The pattern was written for six different EU sizes ranging from 36/37 to 46/47. Data for sizes $40 / 41$ and $42 / 43$ are given in (), data for sizes $44 / 45$ and 46/47 in [ ]. Where data differ between the two combined sizes, these are being separated by a /. Common data for all sizes are typeset in bold.

Symmetry: The ribbing and the toe of the second sock are being worked to mirror the pattern of the first one. Each pattern is marked as a) for the first (= right) and as b) for the second (= left) sock, respectively.
The swirls are meant to be worked identical in both socks, so that they all are true instances of the logo. If you prefer to have mirrored socks, feel free to read the chart starting on the left hand side when working the second sock.

Chart: The chart shows the actual swirl pattern with 24 stitches and 40 rounds and is meant to be placed centrally on the outer sides of the legs (and on the foot's back, optionally). To facilitate reading the chart the number of stitches to knit (with MC ) or to purl (to knit with CC ) is given at the beginning of a sequence of two or more stitches.

## 3 Abbreviations

st(s): stitch(es)
p(3): purl (3 stitches)
R, EoR: round(s), End of Round
k(3): knit (3 stitches)
NdI 1-4: needle 1-4
sl1: slip 1 stitch purlwise with yarn on the WS
RS: right side
WS: wrong side
k2tog: knit 2 stitches together
p2tog: purl 2 stitches together
ssk: individually slip 2 stitches as if to knit, insert left needle tip in front of right needle and knit the two stitches together through the back loops.


## 4 Intarsia in the round

This technique is IMHO an adventurous one... but gives effective results. You should probably have at least some experience in flat intarsia or stranded/Fair Isle knitting. I certainly do not feel like including a tutorial for it in this pattern - if nothing else then because this was my own first project applying intarsia in the round.

Nevertheless, I think I can give some general advice and explanation.

1. Intarsia in the round is worked in the round with MC.
2. On the first round, the motif is worked exactly like you would do with flat intarsia: trapping CC and MC and also catching long floats every few stitches by crossing MC over (or under) CC. Just leave the CC strand dangling when you reach the end of the motif and continue working with MC.
3. On the second round, slip the stitches to be worked in CC and knit the first stitch after the motif. Don't pull MC too tight. If you were to bridge more than a few stitches, give some extra allowance so the strand can be catched with CC here and there. Now, turn to work from the WS, trapping CC. Purl the motif stitches with CC, leave it dangling at the end. Return the just purled stitches to the left needle. Now, adjust MC tension and resume working with MC from the RS.
4. On the next round, the CC strand awaits you at the beginning of the motif.
5. A consequence of this approach is that you will need different balls of CC yarn if the motif splits up into several parts like the swirl. You can then work each part of the motif independently as described above.
6. For the swirl you will need at least three little balls of CC, starting with just one, introducing the second on line 5 of the chart, and the third one on line 12 of the chart. The swirl's inner part formed by the stray single stitches can either be worked with the central or the left ball of yarn or even with a fourth ball, just as you see fit.
7. It is good practice to trap the yarn one stitch before the actual stitch being worked with it (in the direction of knitting), resulting in a neater transition.

## Recipe

## 1 Ribbing

Cast on 60 sts ( 64 sts ) [ 68 sts ], spread evenly onto four doublepointed needles and join to knit in the round. Remember/mark the beginning of round between Ndl 4 and Ndl 1. I recommend a knitted cast on because it gives more elasticity than the long tail cast on.
Always repeat pattern between [] to EoR.
R 1 to 3: [k2, p2].
R 4a) - right sock: [knit the second st first without lifting it from the needle, then knit the first st (lifting both sts), p2]. (Cable to the right.)
R 4b) - left sock: [knit the second st first without lifting it from the needle by passing the first st from behind, then knit the first st, p2]. (Cable to the left.)
R 5 to 12: Repeat R 1 to 4 twice.
R 13 to 14: Repeat R 1 to 2 once.
R 15 to 17: knit. If you wish for a longer leg you can work more rounds in stockinette stitch, i. e. knit more rounds.

## 2 Leg

R 1 to 40 a) - right sock: knit 3 (4) [5] sts, then work appropriate line of Chart 1 on page 7, knit 3 (4) [5] sts, knit Ndl 3 and Ndl 4.
R 1 to 40 b) - left sock: knit Ndl 1 and Ndl 2, knit 3 (4) [5] sts, then work appropriate line of Chart 1 on page 7, knit 3 (4) [5] sts.
R 41 to 43: knit.

## 3 Boomerang Heel with Heel Flap

## Heel Flap

The heel flap is worked back and forth on Ndl 1 and 4 with edge sts in garter stitch (knit on RS aswell as on WS).
Row 1 (RS Ndl 1): knit.
Row 2 (WS Ndl 1 and 4): k1, purl to 1 st before end, k1.
Row 3 (RS Ndl 4 and 1): k1, [k1, sl1], always repeat from [ to ] to 1 st before end, k1.
Work Rows 2 to 312 (13) [14/15] more times, then Row 2 once.

## Heel Turn

Row 1 (RS): knit 17 (18) [19], ssk, k1, turn.
Row 2 (WS): sl1, p5, p2tog, p1, turn.
Row 3 (RS): sl1, knit to the slipped st from the previous row, ssk, k1, turn.

Row 4 (WS): sl1, purl to the slipped st from the previous row, p2tog, p1, turn. Work Rows 3 and 4 until all sts have been worked, ending with a RS row at the end of Ndl4-9(10) [11] sts each on Ndl 1 and 4.
Note: Depending on the size it can happen that the last two rows end early, i. e. directly after ssk/p2tog.

## 4 Gusset

Now resume working in the round.
R 1: Ndl 1: knit 9 (10) [11] sts, then pick up and knit 14 (15) [16/17] sts from the side of the heel (best done from the little knots of the garter edge stitches), make 1 st from the bar between Ndl 1 and Ndl 2
Ndl 2: knit
Ndl 3: knit
Ndl 4: make 1 st from the bar between Ndl 3 and Ndl 4, pick up and knit 14 (15) [16/17] sts from the side of the heel, knit 9 (10) [11] sts - 78 (84) [90] sts.

R 2: knit.
R 3: knit to 3 sts before end of Ndl 1, k2tog, k1; knit Ndl 2 and 3; k1, ssk, knit to end of Ndl 4.
Repeat R 2 and 3 until 15 (16) [17] sts remain on each of Ndl 1 and 4, ending with R 3-60 (64) [68] sts.
At the same time, optionally, when 18 (19) [20] sts remain on each of Ndl 1 and 4 after a R 2 , start working the swirl according to Chart 1 on page 7 centered on the foot's back between Ndl 2 and 3 .

## 5 Foot

The foot (sole and back) is worked in stockinette st, if you choose not to work the back of the foot ( Ndl 2 and 3 ) according to Chart 1.
Work the foot as described until the sole (including the heel turn) measures 16$17 \mathrm{~cm} / 17,5-18,5 \mathrm{~cm}(18,5-19,8 \mathrm{~cm} / 20-21 \mathrm{~cm})$ [21-22 cm/22-23,5 cm].
When trying on the sock should end now shortly below the tip of the fifth toe. I recommend a try-on whenever possible.
Note: For size $38 / 39$ this length corresponds to the swirl chart plus 2 more R.

## 6 Toe

The toe is being worked as a round toe with spiralling decreases to repeat the swirl theme.
a) right sock:

R 1: knit 7 (8) [9] sts, ssk, knit to end of Ndl. Repeat 3 times to EoR.
R 2: knit.
R 3: knit 8 (9) [10] sts, ssk, knit to end of Ndl. Repeat 3 times to EoR.
R 4: knit.
b) left sock:

R 1: knit 6 (7) [8] sts, k2tog, knit to end of Ndl. Repeat 3 times to EoR.
R 2: knit.
R 3: knit 4 (5) [6] sts, k2tog, knit to end of Ndl. Repeat 3 times to EoR. R 4: knit.
Work as established (every time shifting the decrease by one st) until counting 3 sts on each Ndl, ending with a decrease round. Cut yarn and pull it twice through the remaining 12 sts.

## 7 Finishing

Weave in all ends on the WS.
Work second sock accordingly, remember to choose instructions marked b) whenever there is a difference.

Be happy having warm feet! ©

## Emergencies

On questions occurred, errors noticed or panic attacks suffered, PanikSchaf can be reached by e-mail to panikschaf@nopanik.org anytime. Find me on the web at http://panikschaf.nopanik.org or as anuschkasch on ravelry.

Therefore: DON’т PANIC!

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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 18 | 2 |  |  |  | 4 | 434 |
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|  |  |  |  |  |  |  |  |  | 11 |  |  |  | 4 |  |  |  |  |  |  |  | 9 |  |
| 24 | 2 | 22 | 20 | 20 |  | 18 | 1 |  | 14 | 4 | 12 |  | 10 |  | 8 | 6 | 6 | 4 | - | 2 |  |  |

Chart 1. Chart is to be read from right to left. The central marker marks end of Ndl 1 (right sock) or Ndl 3 (left sock). The numbers give the sts to knit (with MC) or to purl (to knit with CC).
Key: $\square$ knit (with MC) purl (knit with CC)

