

Everything You've Always Wanted to Know About Socks...

(but were afraid to ask)

A Knitting Workshop

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Table of Contents

Sock Patterns	3
Teeny Socks for the Sock Workshop	3
Firefighters' Socks	6
"You're Putting Me On" Socks	10
Other Useful References	13
Kitchener Stitch (Grafting)	13
Sock Sizes and Measurements	14
Socks and Knitting on the Internet	15

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Sock Patterns

Teeny Socks for the Sock Workshop

By Kim Salazar, copyright December 2000 (with special acknowledgements to Judy Gibson, the inventor of the no-sew toe method)

This minisock introduces the toe and heel used in my Pine Tree Toe-Up Socks, DK Socks in 3 Sizes, Firefighters Socks, and in my See Saw Socks pattern as published by KnitNet in early 2000. This sample is small and quick to knit. Possible ultimate uses include holiday ornaments, KnitList membership badges, and footlets for Cabbage Patch dolls or very large hamsters.

Materials:

A small quantity of DK weight yarn in a light color.

5 double pointed needles - You can use any size from US #4 to #6.

Tapestry needle for weaving in the ends

Gauge:

Unimportant. This is a non-wearable sample.

Special instructions:

M1 = pick up the bar running between the stitches on each needle, knit through the back of this new "loop" to make an invisible no-hole increase.

yf = bring the yarn to the front of the work WITHOUT making a loop over top of the needle.

No-Sew Toe Cast On:

Take two of the needles and wrap the yarn around them, figure-eight style. The yarn should loop around the bottom needle and cross to the opposite side of the top needle. Loop over it and then return between the two. The result should look something like the illustration at the bottom of the page. Continue

wrapping the yarn this way until you have 6 loops on each needle. Let the end dangle free with no knots or other securings - you'll need to work looseness in the first row out towards the end later. Knots will interfere with this in-flight adjustment.

Take a third dpn and knit across the top needle. Take the fourth dpn and knit across the bottom needle. Be careful not to twist stitches - one needle's loops will be "backward" with the leading edge of the loop on the rear side of the needle. Make sure you knit into the rear side of these "backward" loops.

You now have a very narrow and slightly awkward strip of knitting suspended between two needles.

There should be 6 stitches on each needle. Don't worry if the stitches running down the center are loose, in a couple of rows you can tighten them up by carefully working the excess down towards the dangling tail end.

Toe Shaping:

Row 1: k1, M1, k2. Using another dpn, k2, M1, k1. Using a third dpn, k1, M1, K2. Using the fourth dpn - k2, M1, k1. You should now have 4 live needles in your work, each with 4 stitches on it.

Row 2: Knit all stitches on the first needle. Mark the first stitch on the second needle by inserting a scrap of yarn or safety pin in it as you knit it. This is your center of your row and marks the center bottom of the sock. Knit all stitches on remaining needles.

Row 3: *k1, M1, k3. K3, M1, K1* repeat

Row 4: Knit

Row 5 and subsequent odd rows. Continue adding one stitch after the first stitch of the first and third needles, and one stitch just before the last stitch of the second and fourth needles.

Row 6 and subsequent even rows: Knit.

When you have 8 stitches on each needle (24 stitches total) the toe is done.

Foot:

Continue knitting around with 8 stitches on each needle. Knit about until the sock is approximately 1.5 to 2 inches when measured from the point of the toe.

Heel:

Find the column of the stitch you marked as the center bottom of your foot. The needles to the right and left of it (needles #1 and #2 respectively) will be the ones on which you work your heel. The other two needles (#3 and #4) will lie dormant until the heel is finished. If you like you can move the stitches from #3 and #4 onto a stitch holder or spare piece of string if you are more comfortable working that way.

Start the heel with needle #1 and work the following directions across both needles as if they were a single unit. I prefer NOT to move these stitches onto one needle because using two creates less stress at the ends and tends to minimize any top-of-gusset holes when the foot top stitches are rejoined to the heel.

Row 1 of decrease: K15, bring the yarn to the front of the work (I'll abbreviate this yf from now on), slip next stitch purlwise onto right needle. Turn work.

Row 2: Yf (this wraps the yarn around the slipped stitch), slip the wrapped stitch, p14, slip the next stitch purlwise (keeping the yarn in front of the work). Turn work.

Row 3: Yf (wrapping the yarn around the slipped stitch), slip the wrapped stitch, K13, yf, slip the next stitch purlwise onto the right needle. Turn work.

Continue in this manner, working one less stitch per row before doing the yf/wrap/turn. THERE WILL ALWAYS BE 8 STITCHES ON EACH NEEDLE.

Each row the number of wrapped and retained stitches (as opposed to "live" stitches) will grow by one. Eventually you will have only 4 "live" stitches - 2 on each needle. The remaining 6 stitches on each needle will each have a wrap around them. At this point the heel will look triangle with the top cut off. Along the left and right sides of the triangle will be the wrapped stitches, evenly placed.

The last row before you begin increasing again is the row in which you purl 4 live stitches. When that's completed it's time to begin increasing.

Row 1 of increase: K4, knit the next stitch through the back along with the wrapped loop around its base. (I do this by picking up the loop on the point of my right hand needle, then knitting the loop and the stitch together), yf, slip next stitch knitwise onto the right needle. Turn work.

Row 2: Yf, (wrapping the yarn around the slipped stitch so that there are now TWO wraps at its base), slip the stitch you just wrapped, p4, purl the next stitch along with the loop wrapped around its base, slip next stitch purlwise (keeping the yarn in the front of the work). Turn work.

Row 3: Yf (wrapping the yarn around the base of the slipped stitch), slip the stitch you just wrapped, k5, knit the next stitch through the back of the loop along with the two loops wrapped around its base, yf, slip next stitch knitwise onto right needle, turn work.

Continue in this manner, working across the rows, knitting through the back of the loop (or purling on purl side rows) the next slipped and reserved stitch along with all loops around its base; then slipping and wrapping the stitch after it until you have "reclaimed" all of the reserved stitches and all 8 stitches on each needle are again "live."

When all 8 stitches are "live" the heel is finished and it's time to begin working the stitches on the top of the foot again.

Ankle Join:

Knit two rows around all 24 stitches.

IMPORTANT NOTE: There is a small tendency for a little hole to form at the top of the diagonal line made by picking up the reserved stitches. I counteract this on the first row of my rejoin by picking up a stitch at the top of each of the diagonals, then knitting one of them together with the first stitch on Needle #3 and doing a ssk with the other picked up stitch and the last stitch of Needle #4.

Ankle:

Knit around all 24 stitches until the length of the ankle part of the sock when folded along the heel diagonals is the same as the length of the sock from the heel to the tip of the toe.

Ribbing:

Row 1: *K1, P1* repeat. Continue knitting in K1,P1 rib for about a half inch. Bind off VERY LOOSELY.

Finishing:

Use the tapestry needle to weave in the loose ends at toe and top.

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This pattern © 2000, 2001 by Kim Brody Salazar. It has been adapted from "SIMPLE TOE-UP SOCKS FOR ADULTS IN DK OR LIGHT WORSTED" ©1998, 2000 by Kim Brody Salazar. kbsalazar@mediaone.net; http://www.wiseneedle.com.



The original Firefighters' Socks were knit in red, and can be seen at Wild & Woolly in Lexington, MA

Firefighters' Socks

By Kim Salazar, copyright 1999, 2000, 2001 (with special acknowledgements to Judy Gibson, the inventor of the no-sew toe method)

These socks will fit people wearing women's shoe size 7-10, and men's shoe size 6-9. They are called "Firefighter's socks" because the stitch on the ankle reminded me of ladders; they are warm enough to wear under boots or as house slippers; and they are quick enough to knit in between emergencies. Stahl Wolle's "Big" and "Big Print" are soft worsted weight yarns, with a nice loft. Both are 100% wool and machine washable. Anything that produces a comparable gauge may be substituted

Materials:

3 skeins Stahl Wolle's "Big" or "Big Print"-(50g, 85 yards each.) I used red.

5 double pointed needles - Size US #5

5 double pointed needles - Size US #4 (only if you like tighter ribbing at the top of your socks)

Tapestry needle for weaving in the ends

Gauge:

6 stitches = 1 inch in stockinette on US #5 9 rows = 1 inch in stockinette on US #5

Special instructions:

M1 = pick up the bar running between the stitches on each needle, knit through the back of this new "loop" to make an invisible no-hole increase.

yf = bring the yarn to the front of the work WITHOUT making a loop over top of the needle.

No-Sew Toe Cast On:

Take two of the needles and wrap the yarn around them, figure-eight style. The yarn should loop around the



bottom needle and cross to the opposite side of the top needle. Loop over it and then return between the two. The result should look something like the illustration at the bottom of the page. Continue wrapping the yarn this way until you have 10 loops on each needle. Let the end dangle free with no knots or other securings - you'll need

to work looseness in the first row out towards the end later. Knots will interfere with this in-flight adjustment.

Take a third dpn and knit across the top needle. Take the fourth dpn and knit across the bottom needle. Be careful not to twist stitches - one needle's loops will be "backward" with the leading edge of the loop on the rear side of the needle. Make sure you knit into the rear side of these "backward" loops.

You now have a very narrow and slightly awkward strip of knitting suspended between two needles.

There should be 10 stitches on each needle. Don't worry if the stitches running down the center are loose, in a couple of rows you can tighten them up by carefully working the excess down towards the dangling tail end.

Toe Shaping:

Row 1: k1, M1, k4. Using another dpn, k4, M1, k1. Using a third dpn, k1, M1, K4. Using the fourth dpn - K4, M1, K1. You should now have 4 live needles in your work, each with 6 stitches on it.

Row 2: Knit all stitches on the first needle. Mark the first stitch on the second needle by inserting a scrap of yarn or safety pin in it as you knit it. This is your center of your row and marks the center bottom of the sock. Knit all stitches on remaining needles.

Row 3: *k1, M1, k5. K5, M1, K1* repeat

Row 4: Knit

Row 5 and subsequent odd rows. Continue adding one stitch after the first stitch of the first and third needles, and one stitch just before the last stitch of the second and fourth needles.

Row 6 and subsequent even rows: Knit.

When you have 12 stitches on each needle (48 stitches total) the toe is done.

Foot:

Continue knitting around with 12 stitches on each needle. For my women's size 10 feet I knit until my sock foot measures 6.75 inches (approx. 16.25cm) from the tip of the toe. People less endowed in the foot department should knit until the growing foot when tried on is long enough to generously reach to the point where their ankle meets their foot. The sock foot should not be tightly stretched when measuring. Once you have enough foot length you can begin the heel:

Heel:

Find the column of the stitch you marked as the center bottom of your foot. The needles to the right and left of it (needles #1 and #2 respectively) will be the ones on which you work your heel. The other two needles (#3 and #4) will lie dormant until the heel is finished. If you like you can move the stitches from #3 and #4 onto a stitch holder or spare piece of string if you are more comfortable working that way.

Start the heel with needle #1 and work the following directions across both needles as if they were a single unit. I prefer NOT to move these stitches onto one needle because using two creates less stress at the ends and tends to minimize any top-of-gusset holes when the foot top stitches are rejoined to the heel.

Row 1 of decrease: K23, bring the yarn to the front of the work (I'll abbreviate this yf from now on), slip next stitch purlwise onto right needle. Turn work.

Row 2: Yf (this wraps the yarn around the slipped stitch), slip the wrapped stitch, p22, slip the next stitch purlwise (keeping the yarn in front of the work). Turn work.

Row 3: Yf (wrapping the yarn around the slipped stitch), slip the wrapped stitch, K21, yf, slip the next stitch purlwise onto the right needle. Turn work.

Continue in this manner, working one less stitch per row before doing the yf/wrap/turn. THERE WILL ALWAYS BE 12 STITCHES ON EACH NEEDLE.

Each row the number of wrapped and retained stitches (as opposed to "live" stitches) will grow by one. Eventually you will have only 10 "live" stitches - 5 on each needle. The remaining 7 stitches on each needle will each have a wrap around them. At this point the heel will look triangle with the top cut off. Along the left and right sides of the triangle will be the wrapped stitches, evenly placed.

The last row before you begin increasing again is the row in which you purl 10 live stitches. When that's completed it's time to begin increasing.

Row 1 of increase: K10, knit the next stitch through the back along with the wrapped loop around its base. (I do this by picking up the loop on the point of my right hand needle, then knitting the loop and the stitch together), yf, slip next stitch knitwise onto the right needle. Turn work.

Row 2: Yf, (wrapping the yarn around the slipped stitch so that there are now TWO wraps at its base), slip the stitch you just wrapped, p10, purl the next stitch along with the loop wrapped around its base, slip next stitch purlwise (keeping the yarn in the front of the work). Turn work.

Row 3: Yf (wrapping the yarn around the base of the slipped stitch), slip the stitch you just wrapped, k11, knit the next stitch through the back of the loop along with the two loops wrapped around its base, yf, slip next stitch knitwise onto right needle, turn work.

Continue in this manner, working across the rows, knitting through the back of the loop (or purling on purl side rows) the next slipped and reserved stitch along with all loops around its base; then slipping and wrapping the stitch after it until you have "reclaimed" all of the reserved stitches and all 12 stitches on each needle are again "live."

When all 12 stitches are "live" the heel is finished and it's time to begin working the stitches on the top of the foot again.

Ankle Join:

Knit two rows around all 48 stitches.

IMPORTANT NOTE: There is a small tendency for a little hole to form at the top of the diagonal line made by picking up the reserved stitches. I counteract this on the first row of my rejoin by picking up a stitch at the top of each of the diagonals, then knitting one of them together with the first stitch on Needle #3 and doing a ssk with the other picked up stitch and the last stitch of Needle #4.

Ankle Pattern:

Begin the broken rib ankle pattern:

Row 1: *K3, P3* repeat

Row 2: *K1, P1* repeat

Repeat these two rows until the length of the ankle when folded along the heel shaping is approximately 1 to 1.5 inches less than the length of the foot.

If you like tight ribbing, now is the time to switch to the smaller needles. I don't like tight sock tops so I don't bother.

Ribbing:

Row 1: *K1, P1* repeat.

Continue knitting in K1,P1 rib for about 1.5 inches. Mary Thomas in her "Knitting Book" (a venerable guide to knitting) suggests that socks when folded along the heel shaping should measure the same from toe tip to heel that they do from top ribbing to heel. I find this length to be quite comfortable. You can make yours a tad longer if you're aimed at a "slouch sock" effect, or shorter if you like abbreviated anklets.

Work sock #2 to match. Counting rows is the best way to ensure uniform length between the two.

Finishing:

When both socks are done, use the tapestry needle to weave in the loose ends at toe and top.

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"You're Putting Me On" Socks



Copyright, Judy Gibson, April 1, 1996, revised May 29, 1999 –pattern and images reprinted here by special permission of the author

These are socks knitted from the toe up, with a standard turned heel (worked backwards). The pattern began as an April Fool's Day joke for the knitlist -- the joke being that when finished, they look exactly like the very plainest of socks. The name comes from this joke, plus the fact that you can try them on as you go to check the fit of the foot.

The pattern has a couple of other advantages. The method of casting on at the toes means that grafting the toes together is not necessary (however, an additional joke is that the best way of binding them off is like grafting 40 stitches instead!). Also, the upper part is done last, so if you're running low on yarn you can get the feet done on both socks first before doing the tops.

Materials

Worsted weight yarn, about 200 yards

Set of 5 double-pointed needles, size 5 or 6 (US). If you use 4 dp's, you'll have to be very careful on the increases, which are described in terms of needle numbers.

Gauge:

about 5 1/2 stitches per inch, which is tighter than is usual for this weight yarn.

Note: I use a lifted increase for the toe and gusset increases, because I like the control over which way the new stitches slant away from the old ones. This is made by lifting the loop from the back of a stitch one row below the row you are knitting. You may substitute your favorite inconspicuous increase, such as lifting the bar between the two stitches below, twisting and knitting through it (often called "make 1").

Figure-Eight Cast-on (phony grafted toe)

Based on the method used in Anna Zilboorg's Fancy Feet. For a nice, clear explanation of how this is done, see Kim Salazar's Simple Toe-Up Socks.

Hold two dp needles parallel and wrap the yarn in a figure-eight, making 8 loops on each of the two needles. To do this, hold two needles parallel in the left hand, and also hold the tail of the yarn. Pass the working end of the yarn over the top needle away

from you, through the middle toward you, under the bottom needle away from you, and through the middle toward you, until there are 8 loops on each needle. Don't tie or twist the end of the yarn--just let it hang loose, so you can tighten up the cast-on later.

Next, knit around the 16 loops, being careful not to split the yarns of the cast-on row. The first eight stitches will be hanging the "wrong" way, so you'll have to knit through the back leg of the loop. The second eight will be hanging the right way. When you have finished this round you'll have two needles, each with 8 stitches, and the cast-on row between them.

Knit a round changing to four needles, with four stitches each. (Sometime after you've knitted a couple of rounds you will be able to tighten up the cast-on, using a crochet hook to work the slack toward the tail of the yarn. Fasten off and weave in the end.)

Toe Increases

Round 1: Increase one stitch each needle as follows:

Needles 1 and 3: k1; lift the stitch below the stitch on the left needle and knit it; k to the end of needle.

Needles 2 and 4: k to within 1 st of end; lift the stitch below the stitch on the right needle and knit it; k1.

Round 2: Knit.

Repeat these two rounds until there are 10 stitches on each needle (40 stitches in all).

Foot

Knit on 40 stitches, trying on the sock from time to time until you reach the point where the leg meets the top of the foot. This is about 3 to $3\,1/2$ inches less than the total length of the foot. End at one of the sides of the foot, that is, above one line of toe increases.

Gusset Increases

The rounds begin at the next needle, which will be called needle #1. The stitches on needles 1 and 2 are the sole of the sock, and on needles 3 and 4 are the instep.



Round 1:

Needle 1: K1, lift the stitch below the stitch to the left and knit it, k to the end of needle.

Needle 2: Knit to within 1 st of end; lift the stitch below the stitch just knitted and knit the lifted stitch, k1.

Needles 3 and 4: Knit plain.

Round 2: Knit around plain.

Repeat these two rounds six times altogether. Needles 1 and 2 have 16 sts, and needles 3 and 4 have 10 (52 sts in all).

Heel Extension

Place the heel sole stitches on their own needle as follows:

Knit 10 stitches from needle 1 onto needle 4.

SSK (that is, slip 1 st as if to knit, sl 1 as if to knit, knit these 2 sts together through back loop), k 4 from needle 1 and 6 from needle 2 onto the heel needle. Slip the remaining 10 sts from needle 2 onto needle 3.

There are now 20 stitches held on each of needles 3 and 4; you will work back and forth on the heel needle only.

Row 1:Turn, P2 tog, p across row.

Row 2:Turn. SSK, k across row.

Repeat these two rows until 4 stitches remain, ending with a wrong-side row.

Heel Flap

Turn, sl 1, knit across heel.

Pick up 7 stitches by knitting along the decrease edge. Turn.

Sl 1 as if to purl, p back across the heel and pick up 7 stitches by purling along the other decrease edge. Turn.

You now have 18 sts on the heel needle. You will be knitting the heel flap upward, incorporating one stitch from the adjacent instep needle each time you turn.

Row 1:Sl 1 as if to knit, k across row to the last st. Sl 1, sl 1 from the next needle, k these 2 together through back loop. Turn.

Row 2:Sl 1 as if to purl, p across row to the last st. Sl 1 as if to p, sl 1 from the next needle, p these 2 together. Turn.

Repeat these two rows for a total of nine times, ending with a purl row. You should have 40 stitches (18 on the heel needle and 11 on each instep needle).

Turn, sl 1, and knit a full round, adjusting stitches so that there are 10 on each of four needles.

Leg and Cuff

You're on your own from here! A few rounds of stockinette and then K1P1 ribbing all the way will work--or anything you like. A good height for a sock cuff is the same as the length of the foot, longer if you want to fold it over.

If you will be using a standard cable bind-off, bind off in pattern as loosely as possible, either giving each loop a tug to lengthen it as you pull it through, or using a needle a couple of sizes larger for the binding off. A more elegant and elastic (and need I say, difficult?) way of binding off a ribbed edge is to use what Montse Stanley (Reader's Digest Knitter's Handbook) calls the "Tubular Bind-Off," and Vogue Knitting book calls the "Knit one, purl one bindoff." This is a variant of the Kitchener Stitch, or grafting method used for sock toes.

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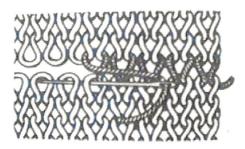
Contact: jgibson@cts.com

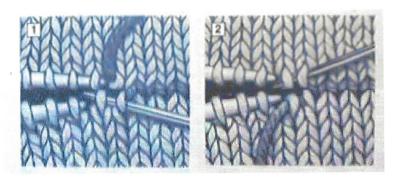
http://www.users.cts.com/crash/j/jgibson/knitting/string.htm

Other Useful References

Kitchener Stitch (Grafting)

Kitchener stitch is commonly used to sew together the up the last several toe stitches in socks knit from the top down. In effect, when grafting you are using yarn and a sewing needle to form the missing row of knits and make an invisible join. Here are two illustrations of how to do it.





Sock Sizes and Measurements

All measurements in inches.

U.S. Shoe Size	European Shoe Size	Width around Top of Cuff	Heel Flap Length	Total Foot Length
Infants/Toddlers				
3 - 5	18/20	5 1/3	1	5 1/8
6 1/2 - 7	22/23	5 7/8	1 1/8	5 7/8
8 - 8 1/2	24/25	6 1/8	1 1/3	6 1/4
Children				
9 - 10	26/27	6 3/8	1 1/2	7 1/8
10 1/2 - 11 1/2	28/29	6 2/3	1 1/2	7 1/2
12 - 12 1/2	30/31	6 7/8	1 3/4	8 1/8
Children/Adult Wome	en			
13 - 1	32/33	7 1/4	1 3/4	8 2/3
2 - 3	34/35	7 1/2	1 7/8	9 1/8
4 - 5	36/37	7 3/4	1 7/8	9 5/8
6 - 7	38/39	8	2 1/8	10 1/4
8 - 9	40/41	8 1/4	2 1/4	10 5/8
10 - 11	42/43	8 1/2	2 1/4	11
Adult Men				
8 - 9	42/43	8 1/2	2 1/4	11
10 - 11	44/45	9	2 1/2	11.1/2
14				12

Socks and Knitting on the Internet

Here are a few non-commercial spots to kick off a tour of Virtual Sock-dom.

wiseNeedle

A non-commercial site featuring yarn reviews, an international glossary of knitting terms, and several patterns – including socks.

http://www.wiseneedle.com

WoolWorks

The sun source of knitting info on the Web, this non-commercial site was the first and is still the most comprehensive.

http://www.woolworks.org

Sockknitters Home Page:

Great source of inspiration! Includes links to the Socknitters eMail List, and several photo collections – including the Magical Mystery Sock Tour: a group project to knit up a visual sample of all the unillustrated sock patterns available on the Web.

http://www.socknitters.com/

Knitting Socks!:

Includes an index to on-line sock patterns, sorted by sock type; and a ton of "how-tos" and technical hints

http://www.teleport.com/~noelvn/socks/sock_knitting.html

Bigfoot

Why we knit socks - plus reviews of sock patterns, and great sock knitting stories.

http://www.users.bigpond.com/twistee/

The KnitList

The "Big List" where knitters worldwide gather to exchange ideas, support, and advice.

http://groups.yahoo.com/knitlist

Sarah Bradberry's home page:

A ton of patterns and other useful info, including several years of the KnitList's holiday pattern exchange.

http://www.geocities.com/handknitter/pattern.htm