

Studio
by **WHITE**

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Taking another look at the knit contour...

by Gini Woodward

The knit contour is one of the easiest and most useful knitting machine accessories to use. With this handy tool, a knitter can knit any shape quickly and easily - with no charting or confusing math. Simply draw the shape, make and measure the swatch and start knitting. Once you've drawn a pattern it can be used with other yarns and stitches by knitting and measuring a new swatch in the desired yarn and pattern stitch then re-setting the stitch and row information in the contour unit. In this issue of Tips and Techniques we'll play with the knit contour so you can knit some clothes for your favorite 18" doll or teddy bear.

Studio has two different knit contours available. The KR-7 is a mechanical model that uses either full or half scale patterns drawn on Studio gridded or plain paper. The KR-11 is a battery powered electronic unit that utilizes patterns drawn in either quarter or half scale on mylar sheets. Similar charting units are available for most machines, under a variety of names.

A half scale triangle ruler is a very helpful tool for drawing patterns. The ruler's measurements are shown half scale, enabling you to draw half scale without testing your math abilities. That is, although the ruler indicates a 2" measurement, it is actually only 1". The ruler sort of "lies" to you so that you can draw a 6.75" line without having to divide by two.

The pattern shapes provided for the doll clothes are already half scale, so you can just trace and knit. There are a few simple steps you need to follow regardless of which contour you are using:



1. Knit an accurate swatch in the yarn and pattern stitch you plan to use for the garment. Cast on the number of stitches and knit the number of rows required for your contour and machine. Measure for gauge.

2. Draw pattern shapes to scale.

3. Plan ahead!

4. Put the correct stitch and row information into the knit contour.

5. Insert the pattern into the knit contour and knit following the shaping provided by the visual schematic and any notations you added during the planning stage.

All this sounds pretty simple, and it is. Personal experience has provided me with some tips for each step, so let's move on to the details.

Swatches

It seems like such a waste of time and yarn, but compared to cost and time you'll commit to the total project, a swatch is a small investment in accuracy. If you are working with a new yarn and are unsure what stitch size to use, play a little by knitting a narrow piece and experimenting with different stitch sizes. Remove the test piece from the machine and pull lengthwise to relax the stitches. Decide which stitch size you prefer. Follow the directions in your machine's manual for knitting the tension (gauge) swatch. Why is it necessary to knit such a large swatch? For one thing, the number of needles used in the swatch should always be wider than the carriage in order to knit an accurate gauge. Also, measuring a wider piece is more accurate than counting the stitches in a single inch. The swatch should rest several hours or overnight. Wash and/or block the swatch in the same way you plan to treat the finished garment, taking care not to stretch or distort the fabric. Measure as directed in the manual, using the green, yellow or blue ruler. Each of these rulers is designed to measure the number of stitches and rows in 10 centimeters and they are 100% accurate - as long as you knit the swatch exactly as instructed in your manual.

Drawing the Pattern

Determine in which scale the schematic will be drawn. Patterns for the KR-7 may be drawn full scale, but usually only half the garment is shown. This is helpful when tracing a sewing pattern. For 1/2 or 1/4 size patterns, it is advisable to draw the pattern first on scrap paper with the appropriate scale ruler and then transfer to the blank paper or mylar provided with the knit contour. All lines should be straight and drawn with a sharp pencil or pen. Thin straight lines prevent errors in the knitting. To conserve paper usage, several pattern pieces might be overlapped, using different colored pencils to avoid confusion. Variations in length, style, etc. can be noted in the same way. Pattern drafting is a semester course in itself, so for the purposes of this article we need to assume that you are tracing a pattern or drawing from a another schematic. It is easy to make minor adjustments for fit, by simply drawing the desired adjustment. When you draw out symmetrical pieces (skirts, sleeves, sweater bodies) its only necessary to show half the garment if you remember to place the center line of the garment piece along the left edge of the paper. Use one of the stitch scales with "0" at the left. The "0" represents the center of the machine and each mark represents a stitch on each side of zero. The outline of the garment piece intersects the ruler, showing how many

stitches to cast on *each* side of zero. So, although the diagram only shows the right half of the garment, you need to repeat everything left of zero for the left half of the garment. Asymmetrical pieces (like pants) are usually drawn to show the entire pattern piece. The vertical center of the garment is placed on the vertical center of the mylar or paper and a center "0" stitch scale is used. On the KR-11, the center pants (for example) either reduce them to quarter scale, or purchase a set of half scale, center zero rulers for the KR-7 from your dealer and cut them down to fit the KR-11 unit.

Plan Ahead

At this point its always tempting to just pop in the correct stitch scale, set the row gauge, and start knitting. However, your knitting project will be more successful if you take a few more minutes for planning. Choose your stitch scale and hold it up to your pattern as though you were knitting. Check for surprises and problems: Are there enough needles on the needle bed to accommodate your pattern throughout the knitting? Will the number of needles required satisfy your stitch pattern repeat? Could you fudge a stitch or two to make a perfectly matched seam? Plan the placement of single motifs, intarsia designs or cables. Note on which stitches the shoulders and neck edges begin. This will ensure the same number of stitches for each shoulder. That takes care of stitches. What can you gain by taking a look at the rows? The stitch scales that come with the knit contour are used for counting stitches as you knit, but because they are marked in units of 10 centimeters. You can use the ruler that matches your *row* gauge information to help determine placements for pockets, stripes, buttonholes, etc. Just turn the ruler vertically and lay it on top of the pattern. What an easy way to make sure that you have positioned the single motif low enough to be sure it is completed before the neck shaping starts! Think how much frustration this little bit of extra planning can save you once you start knitting!

Follow the directions in your manual to set the row gauge, insert the stitch scale and the pattern paper. Accuracy is essential. It is important to knit the garment the same way you knitted the swatch: Use the same yarn in the same color, same stitch size and cam lever setting, the same setting on the tension mast and even the same knitting machine! Be sure the contour device is set to knit in the same scale your pattern is drawn (i.e. full, half or quarter scale). When the pattern is placed in the contour, the stitch ruler indicates the number of stitches and the row setting adjusts the rate the paper or mylar feeds through the contour. Place the pattern into the

contour making sure it is straight. The KR-11 has tractor feed for the mylar assuring even feed.

Knitting Tips

Using the knit contour allows you freedom of choice in details like hems, shaping, etc. It is advisable to make notes as you knit along to assure all pieces will match. Note such things as changes in stitch size when knitting hems, bind off rows and number of stitches bound off at armholes, which row you started the pattern on. Your row counter is still important. Standard knitting patterns direct you to bind off a certain number of stitches. When knitting with the knit contour it is advisable to shift your thinking to what should be rather than how to get there. In other words at an armhole bind off, think bind off *to* 85 stitches, rather thinking bind off 6 stitches. Relax and enjoy the visual process of knitting with the knit contour.

Troubleshooting

Even the best planning can sometimes go awry. So, when a sweater is put together and does not fit the recipient, a little investigative work is in order to track down the problem. Follow these steps to get to the source of the problem.

1. Was it the pattern? Compare the measurements of the garment to the measurements on the pattern at the critical points in the length and width. If the measurements are the same, the pattern needs to be altered to correct the sizing. If the measurements are different, the problem lies elsewhere.

2. Was the tension swatch made properly? Was the contour set properly for the tension swatch? Re-measure the tension swatch. If the stitches and rows were set correctly...

3. Was the garment knit the same as the swatch? The same yarn, same stitch size, same pattern stitch, same machine? If so...

4. Was the swatch handled properly? Knit 24 hours in advance? Pulled lengthwise to relax when remove from machine? Treated as the garment would be? Blocked, but not stretched, scrunched, mutilated or killed?

5. Did the swatch change in the processing? If the swatch was cotton and was washed, dried, and shrunk, the garment will need to be processed to shrink also. 6. Is the contour calibrated properly? Check the row passes by inserting a pattern paper with a couple of marks 10 centimeters apart. Set the row counter to 000, line up the first mark and then knit the same number of rows as the number of your row gauge. If you are short of the mark or have gone beyond it, the row calibration could be off. This

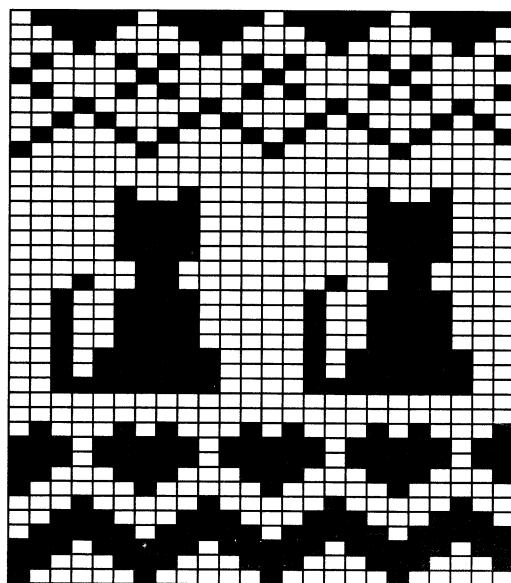
most often happens when people grab a pattern paper and pull it out of the unit without turning off the row gauge dial.

These have been some tips and techniques to help you use your knit contour more effectively. The doll clothes are a great testing ground for you. They require small amounts of yarn and your swatch might already be knit for a previous project, so why not try it right now? You must know some little girl with an 18" doll or bear in need of some clothes! The tuck stitch design is card #3 on punch card machines, # 3 on mylar sheet #1 for the EC-1. Knit this design by alternating 3 colors, changing color every 4 rows.

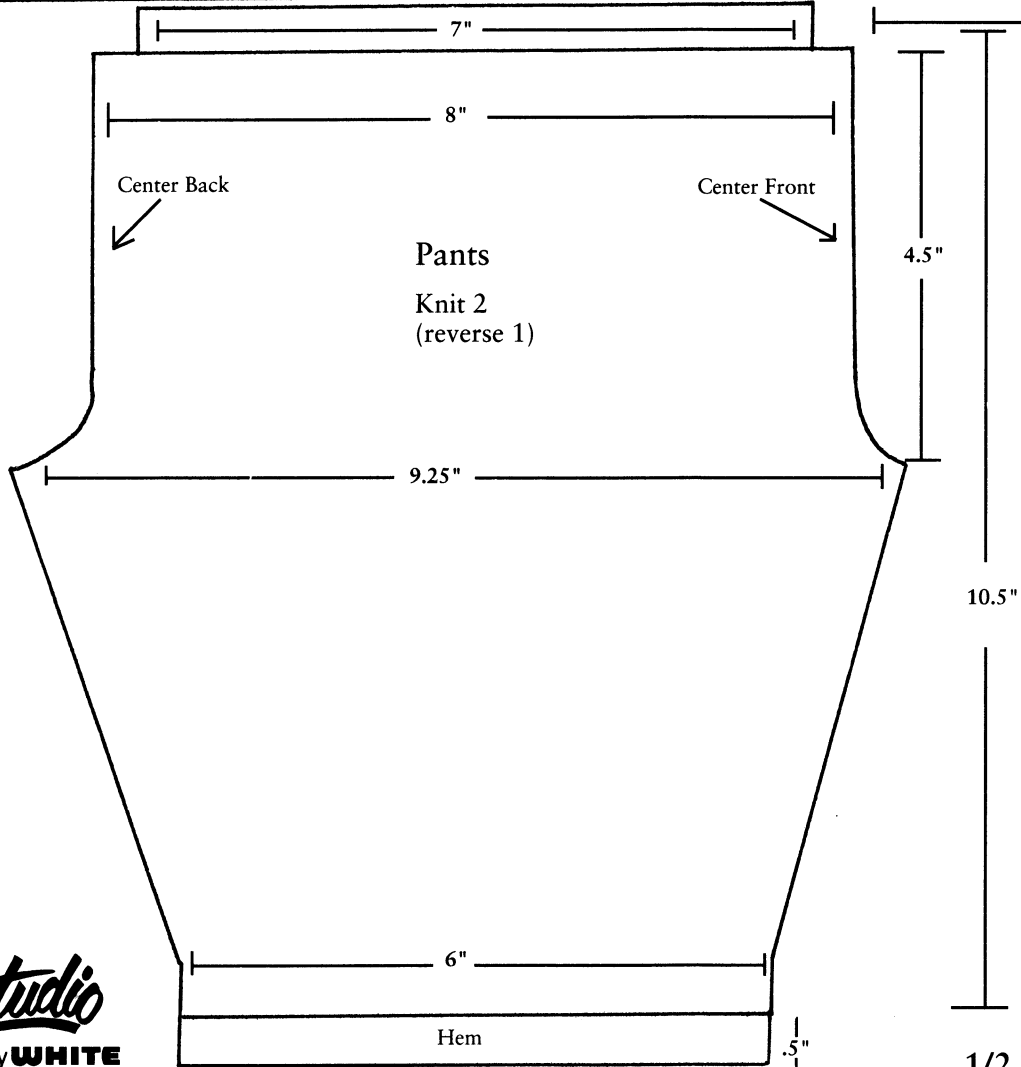
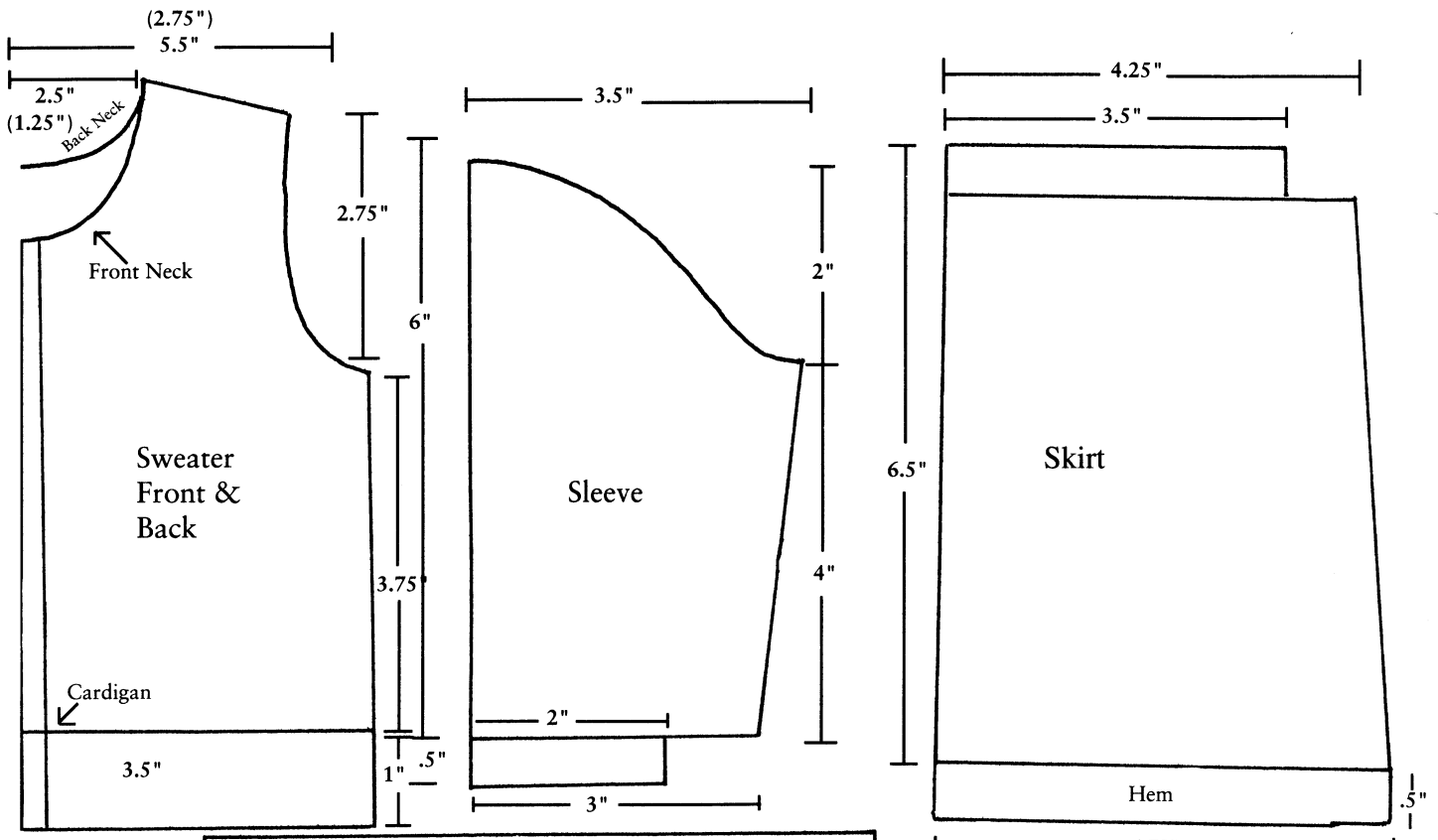
Color directions for Li'l Cat

Main color (MC), Contrast 1 (CC1), Contrast 2 (CC2), Contrast 3 (CC3)

Rows	Feeder	Feeder 2
Rows 1-3	MC	CC1
Rows 4-6	CC2	CC1
Rows 7-11	CC2	CC3
Rows 12-13	CC2	EMPTY
Rows 14-27	CC2	MC
Rows 28-29	CC2	EMPTY
Rows 30-33	CC2	CC1
Rows 34-36	CC2	CC3
Rows 37-39	CC2	MC



Little Cats Design/Punch Card



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1/2 scale
 schematic for 18" dolls

Gini Woodward has been machine knitting 25 years and loves knitting with the knit contour. She has her own line of patterns and is always a popular instructor at seminars.