

Love that Charting Attachment

Knit perfect, customized garments with no math

by Susan Guagliumi

You can knit a perfectly sized garment the first time without knowing anything about converting gauges and without any fancy math. Almost all knitting machines have a schematic charting system that's either built in or an optional accessory. These ingenious units are called by a variety of names: knit contour, -leader, -tracer, pattern driver, or forma. But they all do basically the same thing in basically the same way. As you knit, having set your gauge, a schematic pattern diagram rotates through the unit. It can be half, full, or quarter scale, depending on the model you're using.

All charting attachments come with a basic assortment of schematic patterns (usually in several sizes) for adults and children. Additional patterns are available from knitting machine dealers. You can also buy blank pattern paper designed for your unit and scale rulers for altering patterns, adapting handknitting patterns, or designing your own patterns. In fact, even handknitters will find a charting attachment useful. They can rotate a schematic pattern through it manually and write out row count and shaping directions as they go.

Each system has advantages, and one lesson should have you up and running with any of them. The half-scale system, like that shown on the facing page, seems to be the most commonly used. Its advantage is that it doesn't take up too much space on the machine or in the storage of its paper pattern pieces. But the bulkier full-scale unit has the advantage of showing even more accurate placement for garment details like pockets or motifs. It also enables you to knit directly from sewing pattern pieces without first scaling them down. The advantage of quarter scale is that you can often draw an entire asymmetrical garment on

the pattern sheet. Some units include the option of switching between full and half scale or half and quarter scale. Some use a full diagram of each garment piece; others show only half and expect you to repeat the shaping on the other side.

Patterns of the same scale (full, half, or quarter) are interchangeable among charting units. But charting attachments are not, being machine-brand specific. Prices range from \$100 to \$200.

Gauging and setting up

The key to perfect results is a perfectly prepared and measured swatch. You use the scale ruler that comes with your unit to measure your swatch and select the appropriate stitch scale to place in the front of the unit. Each unit comes with an assortment of stitch scales, which look like rulers. They represent every gauge possible for that machine. The numbers on the stitch scale correspond to the numbers on the needle bed. If your pattern shows the entire garment piece, the scale locates zero in the middle; if your pattern shows only half the shape, zero should be on the left to represent the middle of the bed and the middle of the garment. The pattern outline intersects the scale, showing which needles should be used to knit, as shown in the photo on the facing page. If you're careless about swatching, you'll probably choose the wrong stitch scale and thus cast on the wrong number of stitches.

Knitting

Paper patterns and a charting attachment free you to think about knitting the same way you do about sewing. The shape you see is the shape you'll knit. You can use the same pattern with any yarn, gauge, or stitch style as long as you knit and measure a swatch first. You no longer have to match someone else's gauge or search the stores for a specific

yarn. Just be sure that the size shown on the scaled paper is what you want, and remember to draw designs in reverse since they knit that way.

As you knit, the carriage trips the unit and the pattern rotates through it. As long as the outline of the garment shape remains aligned with the same number, you just keep knitting. When the outline shifts, lining up with a different number on the scale, you increase or decrease manually to shape the piece.

If you're knitting a section of the garment, such as a shoulder, you need to put the needles you aren't using into holding position or scrap off that section of the garment. When you're ready to complete the other side, be sure to reset the pattern sheet.

Patterns and tools

Always check pattern measurements carefully before you begin knitting. You may want to make some changes. Almost all paper knitting-machine patterns are designed by Japanese and Europeans, whose ideas on sizing, fashion, and ease may not quite suit. But with this visual system you'll have absolutely no trouble altering any pattern for a custom fit.

Most purchased patterns show several sizes on each sheet. To avoid confusion, highlight the outline of the size you are using with a colored marker. If you plan to use a pattern often, transfer it to a blank sheet. If you want to make many alterations to an existing pattern, it's probably a good idea to redraw it onto a new sheet. And, of course, you can draw your own patterns, using body measurements and basic charting rules (see "Further reading" on the facing page).

It's important to remember that when you're converting a hand or machine pattern to the charting attachment, you're not interested in numbers of stitches and rows. All you need are the measure-

ments of each section. For example, if you determine that the armhole should be decreased by two inches over three inches of length, just mark those points and draw the curve to connect them.

There are a number of tools available to help you chart or alter patterns. (See "Sources" for more.) One of my favorites is a half-scale ruler (most of the companies have one) that reads an inch for every half inch it measures. With it you can transfer measurements directly to a half-scale pattern without halving them first, since for a two-inch change in the knitting, you need only a one-inch change in the pattern (in quarter scale, 1 in. equals 4 in. of fabric). I also like the dimensional change scale (many versions are available), which enables you to scale patterns from full to half or half to quarter.

You can use your patterns and stitch scale for a lot more than shaping. You'll see at a glance where to place pockets or cables or match designs if you mark these features on the pattern. You can also read the stitch scale for intarsia or isolated motifs or blocks of texture: Draw the details on the pattern sheet and then knit each section on the needles shown on the scale. When I use this method for short row intarsia designs, I always make a dry run first to be sure that the lines I've drawn will produce sharp diagonals. Just rotate the pattern through manually, checking that the line shifts each time by the same number of stitches and rows. When it doesn't, make a pencil dot correction. Afterward, connect the dots to correct the line.

Adapting handknitting patterns

You can convert any pattern for use with your charting attachment. First read the handknitting pattern carefully and tally up all the decreases and rows. Then use the gauge information to figure out the actual lengths of the parts. As you read, you'll notice useful intermittent measurements. Learn to pick up on phrases like, "Knit until the entire piece measures," or "Begin neck shaping 6 in. above armhole." Most lengths will be given in inches and can be used as they are, but widths are generally given in terms of stitch count. Simply divide the number of stitches by the pattern's stitch gauge to find out what the actual width is supposed to be. Once you've drawn the schematic from these dimensions, you're ready to put it in your charting attachment and knit at any gauge. □

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Most knitting machines can be fitted with an ingenious charting attachment that eliminates all the tedium of calculating. All you need is a schematic and a gauge swatch you like. The device shows you when and where to shape or pattern. (Photo by Susan Kahn)

Sources

If your local bookstore or knitting machine dealer does not have the following tools and self-published or imported books, you can mail-order them from *Kruh Knits*, PO Box 15787, Avon Park N, Avon, CT 06001; (800) 248-KNIT (in CT 651-4353).

Tools

Knit Leader—Brother or Knitking KH 230-270 Bulky, KH820-950, all standard.

Knit Contour—Studio by White or Singer all models.

Knit Tracer—Toyota KS 950, 901, 858.

Pattern Driver—White 1401, 1402, 1501, 1502, 1602 (no longer made).

Forma—Passap (no longer made).

Half-Scale Triangular Ruler—for altering or designing half-scale schematics.

Dimensional Change Scale—helps you convert schematic patterns between half and full scale. Ideal for converting sewing patterns to half-scale schematics.

Free Line Drawer—a flexible ruler marked for half scale. Used for drawing curves on schematics.

Blank Charting Paper—specific to each model.

Further reading

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Norman, Mary Louise. *Nicely Knit Lines*, 1983.

Seto, T. *Simple Pattern Drafting for Machine Knitters*, 1974.

Stern, Jill (Knitech). *Drafting Made Easy*, 1987.

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