## Appendix 520

## A BETTER WAY TO WRITE OUT INSTRUCTIONS FROM A CHART

If for some reason we wanted written-out instructions to work from instead of simply working from the chart (perhaps we have a knitting friend who is still afraid of charts), it's very easy to translate a chart to that form. It's also easy to write those instructions in a way that makes it clear which parts of the instructions are for any possible borders that may be present and which parts are for any motif or other pattern.

## The Purl-Diamond Project

Let's use the first project, the purl diamond with seed-stitch border.


We start at the lower right, the same place where we would begin knitting, because the first row is a public-side row. If the project chart had a single foundation row (like we had for Braid and Wavy Cable in the Aran sampler), then we would start at the lower left, since the first row we work would be a private-side row.

## Casting On

There is one stitch cast on for each symbol on the first row, so we cast on twenty-five stitches. ${ }^{1}$

CO 25.

## The Bottom Border

Since the bottom border is seed stitch, we only need to say which stitch to start the first row with. For the rest of the row, we alternate knits and purls, then in subsequent rows we simply knit the purls and purl the knits.

Rows 1-5: seed-stitch border (start row 1 with K1).
If we write the instructions more generally like this, instead of in actual numbers of knits and purls, then someone using our instructions will have an easier time changing the border.

## The Motif Rows

We will do future knitters (including ourselves five years-or five months-from now) a big favor by being more explicit about which stitches form which part of the project.

## Row Six

Row six, a private-side row, starts the motif.

Since it's a private-side row, we have to read the chart row from left to right, and we have to switch knits to purls and vice versa. Since we've already established explicitly a seedstitch border along the bottom, we tell the knitter that the first five stitches form the seedstitch left border, so the knitter will know to purl the knits and knit the purls.

Row 6 (WS): 5 seed sts
Specifying that the first five stitches form the border will again help someone who wants to use the motif but also wants to change or eliminate the seed-stitch border.

The next fifteen stitches show on the chart as knits, but since we're looking at a privateside row, we have to flip knit to purl.

[^0]Row 6 (WS): 5 seed sts, [P15 (motif)]
Using brackets as well as the descriptive word again signals to ourselves and other knitters using this pattern what each part of the instructions means.

Since the row ends with the right border, we again specify the number of stitches in it.
Row 6 (WS): 5 seed sts, [P15 (motif)], 5 seed sts.
Now that we've shown what each part of each instruction line is, we can be a bit less verbose with the remaining lines, relying instead on the formatting we've established.

It's a good idea to double-check for typos by adding up the number of stitches shown in the instructions. Since five plus fifteen plus five equals twenty-five, we know we have been numerically accurate.

## Row Seven

Row seven is a public-side row, so we read the chart symbols from right to left.


We again help the knitter by saying that the first five stitches are to be kept in seed stitch for the right border.

Row 7: 5 seed sts
The motif stitches are all knit, except the center stitch, which is purled.
Row 7: 5 seed sts, [K7, P1, K7]
Since row five introduced the square brackets enclosing the motif instructions, the central K7-P1-K7 is set apart in brackets to indicate the motif stitches.

The row instructions finish with the left border.
Row 7: 5 seed sts, [K7, P1, K7], 5 seed sts.
Let's check to make sure we haven't introduced any typos. We have ten stitches for the left and right borders, and fifteen total stitches in the motif portion. That adds up to twentyfive total stitches, which is correct.

## An Alternate Way to Group the Stitches

If brackets seem unusual, then we could separate the three portions of the motif rows with, say, semicolons.

Row 7: 5 seed sts; K7, P1, K7; 5 seed sts.

The semicolons are a bit harder to see potentially, but any kind of formatting will be fine as long as it's consistent and shows which stitches are for what.

## The Remaining Rows

Continue reading each row in the proper direction, translating the symbols to words. The entire instructions for this piece would be

CO 25.
Rows 1-5: seed-stitch border (start row 1 with K1).
Row 6 (WS): 5 seed sts, [P15 (motif)], 5 seed sts.
Row 7: 5 seed sts, [K7, P1, K7], 5 seed sts.
Row 8: 5 seed sts, [P6, K1, P1, K1, P6], 5 seed sts.
Row 9: 5 seed sts, [K5, P1, K3, P1, K5], 5 seed sts.
Row 10: 5 seed sts, [P4, K1, P5, K1, P4], 5 seed sts.
Row 11: 5 seed sts, [K3, P1, K7, P1, K3], 5 seed sts.
Row 12: 5 seed sts, [P2, K1, P9, K1, P2], 5 seed sts.
Row 13: 5 seed sts, [K1, P1, K11, P1, K1], 5 seed sts.
Rows 14-25: Work rows 12-1 in reverse order.
BO.

## Comparing the Two Versions of Instructions

Let's compare this version of the instructions to the original instructions. In the table, both columns are the same width, and both versions of the instructions are the same font size.

| Original Instructions | Detailed Instructions |
| :---: | :---: |
| CO 25. <br> Row 1 (RS): * K1, P1 *, rpt from * to * across, K1. <br> Rows 2 to 5: As row 1. <br> Row 6: (K1, P1) twice, K1, P15, (K1, P1) twice, K1. <br> Row 7: (K1, P1) twice, K8, P1, K8, (P1, K1) twice. <br> Row 8: (K1, P1) twice, K1, P6, K1, P1, K1, P6, (K1, P1) <br> twice, K1. <br> Row 9: (K1, P1) twice, K6, P1, K3, P1, K6, (P1, K1) twice. <br> Row 10: (K1, P1) twice, K1, P4, K1, P5, K1, P4, (K1, P1) <br> twice, K1. <br> Row 11: (K1, P1) twice, K4, P1, K7, P1, K4, (P1, K1) twice. Row 12: (K1, P1) twice, K1, P2, K1, P9, K1, P2, (K1, P1) twice, K1. <br> Row 13: (K1, P1) twice, K2, P1, K11, P1, K2, (P1, K1) twice. Rows 14-25: Work rows 12-1 in reverse order. BO. | CO 25. <br> Rows 1-5: seed-stitch border (start row 1 with K1). Row 6 (WS): 5 seed sts, [P15 (motif)], 5 seed sts. Row 7: 5 seed sts, [K7, P1, K7], 5 seed sts. <br> Row 8: 5 seed sts, [P6, K1, P1, K1, P6], 5 seed sts. Row 9: 5 seed sts, [K5, P1, K3, P1, K5], 5 seed sts. Row 10: 5 seed sts, [P4, K1, P5, K1, P4], 5 seed sts. Row 11: 5 seed sts, [K3, P1, K7, P1, K3], 5 seed sts. Row 12: 5 seed sts, [P2, K1, P9, K1, P2], 5 seed sts. Row 13: 5 seed sts, [K1, P1, K11, P1, K1], 5 seed sts. Rows 14-25: Work rows 12-1 in reverse order. BO. |

## Advantages of the Detailed Instructions

Even a cursory comparison of the two versions shows several benefits of writing out instructions in the more detailed way.

## Border and Motif Stitches Are Separated and Identified

The most noticeable thing about the detailed instructions is that the border stitches and rows are clearly separated from the stitches and rows that make the motif. This separation makes it very easy for someone to use just the motif or to alter the border in some way.

## The Detailed Instructions Help Catch Typos

Now look at the detailed instructions for the motif, which we enclosed in square brackets.
Do you see how the first and last numbers both decrease by one stitch on succesive rows? The sequence of

7-6-5-4-3-2-1
shows how the purl stitches are moving outward from the single purl stitch in row seven.
That matches up perfectly with what the chart shows.
The number of stitches between the purl bumps on rows eight through thirteen increase by two in each row (P1-K3-P5-K7-P9-K11). That might seem odd, until we consider that we're forming a pair of diagonal lines. Since the motif shape is a diamond, we have to move each of two purl bumps farther apart on every row. Since we move each bump one stitch, then there must be two more stitches between them from one row to the next.

The original version of the instructions sort of shows the same thing, and if we know what to look for, we can see it. But since the motif stitches are mixed with the border stitches, it's much harder to see what's going on.

## The Space Needed for Each Version

One of the reasons pattern writers and editors mix border and motif stitches is to save characters. If they can make an instruction line a few characters shorter, it may prevent the line from wrapping around to the next line (like rows eight through thirteen do in the original instructions in the table above). If they can prevent wrapped lines, then each pattern will take up less of the page, so either the book's pages can be physically smaller or more patterns can be fit into it.

But does the detailed version take up more space than the one that mixes border and motif stitches? Clearly not. In fact, the detailed version never wraps a single line! And according to my word processor, the original version of the instructions has 604 characters, including 125 spaces. The detailed version has only 515 characters with just 108 spaces.

Since the detailed version uses fewer characters, it also uses fewer lines. Isn't it interest-
ing that giving knitters complete information about each portion of each row's instructions both improves the knitter's understanding and actually takes up less space!

## Disadvantages of the Detailed Directions

There is one thing that the detailed instructions lack.

## The Knitter Must Know What Seed Stitch Is

We could add to the detailed instructions a simple line like
To make seed stitch, work K1-P1 across the first row, then on subsequent rows, knit the purls and purl the knits.

Adding this instruction line to the table above would still leave the detailed instructions shorter when considered as lines.

But if the book we're imagining has other projects with seed stitch, then the general instructions for working seed stitch could be placed in one location, instead of having them explicitly written out in every single project that uses seed stitch. Centralizing the instructions would also save characters, lines, and potentially pages in the book, not to mention the effort spent in typing and proofreading the stitch-by-stitch instructions in all the patterns containing seed stitch.

## The Basket-Weave Hot Pad

Let's use this same technique to write out instructions for projects that use a pattern to make an allover fabric.

## The Original Instructions

These instructions are not very helpful if you want to use the basket-weave pattern for a different project.

CO 40.
Rows 1-7: K.
Row 8 (WS): K4, P32, K4.
Row 9 (RS): K6, * P4, K2 *, rpt betw *, ending K4.
Row 10: *K4, P2 *, rpt betw *, ending K4.
Rows 11-12: Rpt rows 9-10.
Row 13: K.
Row 14: K4, P32, K4.
Row 15: K4, P3, * K2, P4 *, rpt betw * 3 more times, K2, P3, K4.
Row 16: K7, * P2, K4 *, rpt betw * 3 more times, P2, K7.
Rows 17-18: Rpt rows 15-16.
Rows 19-54: Rpt rows 7-18 3 times.
Rows 55-60: K.
BO.
If you're able to pull the basket-weave pattern out of these instructions, you need to be writing your own book! (And I get the first copy! Well, OK, you can have the first, and I'll take the second.)

## The Chart for the Basket-Weave Variation

Here's the chart for the basket-weave variation that eliminates partial blocks at the left and right and puts a row of original blocks at the top of the item to match the row of blocks at the bottom.


## Writing Out the Instructions

Just to remind us, stitches $G$ through $L$ form the stitch repeat. Stitches A through F and M through T make up two different groups of plus stitches. If we don't have both groups of plus stitches, then we'll get partial blocks on the ends of the rows of offset blocks.

Likewise, rows one through twelve constitute the row repeat, with rows thirteen through twenty forming plus rows done only once and only after all the row repeats have been completed.

Let's write out instructions for this chart.

## A Dilemma

Right away we are faced with a dilemma. Even though the first two rows show as all publicside knits, we have the stitch-repeat markers breaking those two rows into three pieces each. Do we meticulously break the instructions for rows one and two into three parts, one for the first group of plus stitches, one for the stitch repeat, and one for the second group of plus stitches?

While it might be thought of as "more correct," there doesn't seem to be a good reason to be quite so long-winded. (Of course, a year from now I'll come across a situation where I need to be long-winded. Sigh.)

## The First Two Rows

Let's describe the first two rows both ways, just as an exercise.

| The Short Way | The Complete Way |
| :---: | :---: |
| Row 1 (RS): K. Row 2 (WS): P. | Row 1 (RS): K6, *K6 *, rpt from * across to last 8 sts, K8. <br> Row 2 (WS): P8, * P6 *, rpt from * across to last 6 sts, P6. |

Wow, the complete way looks really silly. But let's press on to the rows with the original purl blocks.

## The Original Row of Blocks

Again, we're faced with a bit of a dilemma. For the first row of purl blocks, the first group of plus stitches-the ones before the stitch repeat-are identical to the stitch repeat. We also could fold in the first six stitches of the plus stitches at the end of the row into the stitch re peat.

So do we explicitly spell out all the plus stitches, or do we simplify by silently including them in the stitch repeat? Let's write out both versions.

| The Short Way | The Complete Way |
| :---: | :---: |
| Row 3: *K2, P4 *, rpt from * to last 2 sts, K2. Row 4: P2, *K4, P2 *, rpt from *. | Row 3: K2, P4, *K2, P4 *, rpt from * across to last 8 sts, K2, P4, K2. <br> Row 4: P2, K4, P2, *K4, P2 *, rpt from * across to last 6 sts, K4, P2. |

Rows five and six duplicate rows three and four, and rows seven and eight are the same as rows one and two.

| The Short Way | The Complete Way |
| :--- | :--- |
| Rows 5-6: Rpt rows 3-4. <br> Rows 7-8: Rpt rows 1-2. | Rows 5-6: Rpt rows 3-4. <br> Rows 7-8: Rpt rows 1-2. |

## The Offset Row of Blocks

For the offset blocks, we have no choice about specifying both groups of plus stitches explicitly. Neither of them matches the stitch repeat for these four rows. We do get a break on rows eleven and twelve, which simply repeat rows nine and ten.

| The Short Way | The Complete Way |
| :---: | :---: |
| ```Row 9: K5, P1, * P3, K2, P1 *, rpt from * to last 8 sts, P3, K5. Row 10: K5, P3, *K1, P2, K3 *, rpt from * to last 6 sts, K1, P5.``` Rows 11-12: Rpt rows 9-10. | Row 9: K5, P1, *P3, K2, P1 *, rpt from * to last 8 sts, P3, K5. <br> Row 10: K5, P3, *K1, P2, K3 *, rpt from * to last 6 sts, K1, P5. <br> Rows 11-12: Rpt rows 9-10. |

We would now have a line that instructs the knitter to work rows one through twelve as many times as desired.

| The Short Way | The Complete Way |
| :---: | :---: |
| Rpt rows 1-12 as many times as desired. | Rpt rows 1-12 as many times as desired. |

## The Plus Rows

Once again, we have the same dilemma as for the row of original blocks. The first group of plus stitches is identical to the stitch repeat for the eight plus rows. Not only that, but the entire group of plus rows is identical to rows one through eight of the row repeat. Once again, we'll do it both ways.

| The Short Way | The Complete Way |
| :--- | :--- |
| Rows 13-20: Rpt rows 1-8. | Rows 13-20: Rpt rows 1-8. |

## The Written-Out Instructions for the Basket-Weave Variation

Now let's pull together all the written-out instructions in both forms.

| The Short Way | The Complete Way |
| :---: | :---: |
| Row 1 (RS): K. <br> Row 2 (WS): P. <br> Row 3: *K2, P4 *, rpt from * to last 2 sts, K2. <br> Row 4: P2, *K4, P2 *, rpt from *. <br> Rows 5-6: Rpt rows 3-4. <br> Rows 7-8: Rpt rows 1-2. <br> Row 9: K5, P1, * P3, K2, P1 *, rpt from * to last 8 sts, P3, K5. <br> Row 10: K5, P3, *K1, P2, K3 *, rpt from * to last 6 sts, K1, P5. <br> Rows 11-12: Rpt rows 9-10. <br> Rpt rows 1-12 as many times as desired. <br> Rows 13-20: Rpt rows 1-8. | Row 1 (RS): K6, * K6 *, rpt from * across to last 8 sts, K8. <br> Row 2 (WS): P8, * P6 *, rpt from * across to last 6 sts, P6. <br> Row 3: K2, P4, * K2, P4 *, rpt from * across to last 8 sts, K2, P4, K2. <br> Row 4: P2, K4, P2, *K4, P2 *, rpt from * across to last 6 sts, K4, P2. <br> Rows 5-6: Rpt rows 3-4. <br> Rows 7-8: Rpt rows 1-2. <br> Row 9: K5, P1, *P3, K2, P1 *, rpt from * to last 8 sts, P3, K5. <br> Row 10: K5, P3, *K1, P2, K3 *, rpt from * to last 6 sts, K1, P5. <br> Rows 11-12: Rpt rows 9-10. <br> Rpt rows 1-12 as many times as desired. <br> Rows 13-20: Rpt rows 1-8. |

So how do these two variations look? As much as I am for charts, I am also for simplifying things. And there's no way I'd want to work from the longer form of the instructions. The long form simply gives too many places for a nasty typo of the "K5/K6" variety. It also hides the fact that there are really only four pattern rows: rows three, four, nine, and ten.

And frankly, rows four and ten could be simplified even further, to
Work the sts as they present themselves
which means
$K$ the knits and $P$ the purls
So in reality, there are only two rows in the whole, twenty-row pattern. Of course, we carefully combine those two "real" rows with copies of themselves and with rows of plain old stockinette, but if you won't tell anyone how easy it is to work this complicated-looking pattern, I won't either!


[^0]:    ${ }^{1}$ This is true since each symbol on row one is one stitch wide. If there were a cable on row one, we'd cast on for it however many stitches wide it was. If we had a decrease on row one, we'd cast on however many stitches there are before we work the decrease. If there is a yarnover on row one, we don't include it in the cast-on stitch count, since yarnovers are worked between existing stitches.

