



Lesson #3

#10 Stars & Stripes Cap

From the book, Our Best Knit Collection by Leisure Arts (1998)

Materials you will need:

Our Best Knit Collection by Leisure Arts (1998)

Artisan Knitting Machines Model 70D Instruction Book

Enough yarn to complete your project using two or three colors

Graph Paper with larger squares

Colored pens or pencils

Knitting Skills You Will Need to Know for Lesson #3

How to take a gauge

Measuring your tension swatch

Knitting with waste yarn and nylon ravel cord

Picking up stitches- from waste yarn, and from a finished edge

Using hold position levers R & L

Using side levers for “free pass knitting”

Multiple decreasing across a knitted row

Casting on your ribber for 1:1 ribbing

Seaming: crochet stitch, and mattress stitch

Knitting Terms You Will Need to Know for Lesson #3

K2 tog- Single decrease –This stitch slants to the **right** on the **knit side** of your fabric.

If you **move your stitch to the left on your knitting machine**, purl side facing you, the upper stitch slants to the right on the knit side of the fabric.

Stockinette Stitch –Knit 1 Row, Purl 1Row (K 2 rows on your knitting machine)

Crossed or Twisted Stocking Stitch - In hand knitting this stitch is created by inserting the needle through the back of the loop instead of the front, causing the loop of the stitch to cross right over left on the knitted side. In machine knitting we can achieve the same effect by removing the stitch from its needle, then twist the stitch clockwise $\frac{1}{2}$ (double eye transfer tool) to one full rotation (latch tool), next replace the stitch back on to the existing needle.

Discussion:

Modern slip stitch or skip stitch Fair Isle knitting involves two or more colors knitted across one row of knitting. Yarn colors are stranded on the reverse side as the yarn is carried across from color to color creating these multiple strands of yarn. “Float” or “floats” is a term that is commonly used to refer to these strands of yarn. Early examples of this type of knitting dates back to Arabia, where knitted silk examples were found dating from the 7th to 9th centuries A.D. Best known examples come from Fair Isle, Spain, Balkan States, and Scandinavia. The peasant type of knitting utilized two natural colors of yarn in one row. Continental countries often carry three or four colors in one line of knitting. Today, both of these types of knitting are



referred to as being Fair Isle knitting, and include modern multicolored slip stitch or skip stitch patterns knitted with two or more colors in one row.

Pattern # 1 Band Knitted in Crossed or Twisted Stocking Stitch Rib Knit:

Pattern #1 Crossed or Twisted Stocking Stitch-

As you read your pattern, you will notice that this stitch is used in the ribbed band of the cap for rows 1-11. This pattern can be achieved in two ways. Cast on in 1/1 rib and knit one row. Loosen your tension on the ribber to at least main body tension or one or two tensions looser depending on your main body tension and the elasticity of your yarn. The reason for this is that as the stitch is twisted, it adds tightness and added tension to that stitch. Make sure you use plenty of weights on your knitting ends. Starting from either the right or left going across the needle bed manually remove each stitch from its existing needle with the double eye transfer tool. Keeping the stitch firmly on the needle, turn clockwise ½ turn, sliding the now twisted stitch back onto the needle from which it came. Continue doing this until all ribbed stitches are twisted. Knit one row and repeat this process each row until eleven rows are completed. Transfer all your stitches to the main bed (MB). Change your carriage. You are now ready to begin your Fair Isle knitting. Depending on your yarn type and the tension used, you may need to manually knit the ribbed stitches across each row to prevent them from gathering loops instead of stitches in their latches.

[Click here to view a Quick Time Video -](#)

Modified Version of the Twisted Stocking Stitch

Another way to do this, which achieves a similar but more “twisted” textured result is to cast on in 1/1 rib and knit 11 rows. (Test your tensions for this first to achieve the results you want. The tension I used knitting with 4-ply acrylic was one less than the main body tension on both beds.) Next, drop your ribbed stitches from their needles and lower your ribbing bed. You now can see the dropped ribbed stitches EON across the needle bed. Unravel each dropped row as you come to it, unraveling to the first knitted stitch. Starting from the **front side** of the knitting (the side that is facing you), follow the directions in your instruction manual on page 47, # 1-7 only your latch tool will be in the front of your knitting not in the rear. Taking your latch tool starting from the front, pick up the loop from the first knitted stitch (after the original cast on rows) at the bottom of your ribbing. Place this stitch behind the latch, catch the next bar above in the hook, and knit it through the existing loop behind the latch. This should create a knitted stitch on the purl side. Next, twist the stitch you just knitted one full rotation to the right (clockwise). Next, pick up the next rung and crochet latch it up, twist that stitch clockwise one full rotation to the right and continue this process until all the stitches in the row are knit in this way. Transfer the last latched stitch to the empty needle on the MB. Continue doing this across the needle bed row by row EON until all the ribbed stitches are completed. You should now have no more remaining empty needles on your MB. Change your carriage and your yarn to knit one row ravel. Waste knit for one inch. Remove your knitting from the MB and turn your knitting. Now replace your knitting to the MB, picking up the stitches from the last rib knitted row made. The twisted stitches are now facing away from you on the right side of your knitted fabric. Remove your ravel cord and waste knitting. You are now ready to begin your Fair Isle pattern knitting.

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Pattern # 2 Knitted Fair Isle

Knitting Fair Isle on a manual knitting machine can be creative and fun. One must first understand the concepts of needle position and their relation to the Hold Levers right and left, and the Side Levers right and left (see pg 4 in 70D instruction manual). When both Holding Levers are engaged, only the needles in E position do not knit in either direction of the knitting carriage. When the Holding Lever on the left is engaged, as the carriage is moved from right to left the needles in E position to the left of the carriage do not knit. When the carriage is moved from left to right the needles in E position on the right of the carriage do knit. Conversely, when the Holding Lever on the right is engaged, as the carriage is moved from left to right, the needles in E position to the right of the carriage do not knit, but when the carriage moved towards the left again, unless the left Holding Lever is engaged the needles in E position will knit. The Side Levers work on the same principle as the Holding Levers but with needles in B position only. When the left Side Lever is engaged, as the carriage moves from right to left, only the needles in B position located to the left of the carriage do not knit but, when the carriage moves from left to right the needles in B position to the right of the carriage do knit. When the right Side Lever is engaged, as the carriage moves from left to right the needles to the right of the carriage in B position do not knit. This free movement in either direction is commonly referred to as a free pass. In order to move in both directions “freely” the right and left Side Levers must be engaged.

When knitting on the 70D, a manually operated knitting machine, the carriage is able to knit one color at time per knitted row. With a little planning, yarn colors need to be changed only every two passes of the carriage, right and left, leaving no long strings in the process. With the strategic use of the Holding Levers, and Side Levers, it is possible to knit selected needles in one direction, and with a change of yarn, return knitting in the opposite direction a different selection of needles with the second color. Even though the carriage may pass twice, it is only completing one knitted row. One always has the option to manually pull the selected needles knitting the colored pattern by hand manipulation on the machine. Depending on the pattern complexity and length, this method may provide an efficient and alternate way to knit Fair Isle patterns.

In knitting this pattern repeat, one is able to complete this pattern by knitting one color in two carriage passes, then change the yarn and make two more passes, completing two rows of Fair Isle with four carriage passes. Patterns for double Jacquard knitting are created utilizing a similar system of knitting two rows of main yarn, and two rows of contrast yarn. The knitting always begins and ends with a single main yarn color row.

First, read the pattern completely before beginning. Make sure you understand the pattern. Notice how many colors are needed to complete the pattern. Notice that the pattern changes each row over six knitted rows. In machine knitting, it is recommended that you start counting your pattern from the same side each row when you are able. This may be impossible for asymmetric patterns however; most Fair Isle patterns have some sort of pattern repeat. Larger patterns may need to be reassessed, and knitted in a different way due to long floats on the back.

Graphing Your Pattern

In this lesson, we will be creating two visual charts or graphs to follow. The first is a visual graph of the actual pattern given in the knitting directions. The second is a modified version created especially for the 70D, utilizing its unique features to create a knitting fabric that knits easier and faster.



Begin on page 13 of your pattern book. Look to where it says “Crown” and read the entire pattern beginning with Row #1. Notice that the pattern does not provide a visual graph of the Fair Isle pattern. Many hand knit and machine knit patterns display a graphed picture of the Fair Isle pattern in the directions. This visual cueing is important for both the experienced knitter and the novice. It can provide a future pattern reference to be used over again. Next, notice that there are two colors used in this part of the pattern, White and Red. White and Red is repeated every three stitches to a total of six stitches. This becomes the pattern repeat. This information is important to know when we graph our pattern. Your graphed pattern needs to be wide enough horizontally and long enough vertically to accommodate your pattern repeat and large enough for you to “see”. Since this pattern repeat is symmetric, it is not necessary to graph a pattern as wide or long as our knitted item. Since the graph paper is White, and one of the colors is White, I chose the color Green as a substitute for graphing this pattern in both the graphs provided. Next, on your graph paper you will need to number your rows and stitches. On the first Key, I graphed 21 stitches and 12 rows. I could have easily graphed only 12 stitches but I felt I needed the additional stitches to visually see the pattern better. Customize your pattern as needed following the above guidelines. This is a tool for you to use.

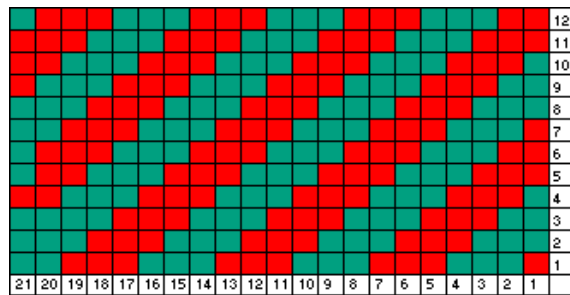
Begin charting the pattern. In reading further under Crown, notice that in knitting the first row, #1, our pattern begins. Chart your first row with Red K1, White K3, and continue your pattern repeat across. This becomes the first row of the **right side** of the knitted item. This means that on this row and on the following subsequent **odd rows** the pattern begins on the right side, and that on the **even rows** the pattern begins on the purl side, **at the opposite end**. This information is important because the rows do not begin and end the same. Therefore, the end of row #2 becomes the first row in our knitted graph on row # 2. In your pattern book on row # 2 it says, White P3 across. See how this becomes the beginning of our pattern repeat on row # 2 (Green is substituted for White). Continue finishing your graph in this manner until you have the six rows charted. Your graph should look something like mine below.

Graph #1

Key:

* White in the original pattern has been substituted with the color Green

Next, we will begin graphing our second pattern utilizing the concepts of repeating the main (Green) color twice, and the second color (Red) twice, eliminating the need for changing the yarn every row. To accomplish this, each



row is designated for one color. We have two colors in the pattern that are knit over six rows. To figure the minimum length you multiply the number of colors used times the rows of the pattern. The length of the pattern is 6 x 2 colors = 12 rows total. I have originally charted 12 rows to visually see the pattern. In example, # 2 the pattern is extends over 24 rows but only 12 rows are necessary. The width remains unchanged.

Starting with the first row, choose the first color given in the pattern (Red) and graph only that color across the row. In row #2, **graph the second color** given in the first row across the **second row**. Remember Green has been substituted for the color White for visibility. We have graphed the color Green in row #2, therefore in row #3 we need to graph with the color Green from the second row of our original pattern (Graph #1). We now have two repeated knit



rows using the Green color. The color in the next row now needs to change to Red. Row #4 graph color Red across the row. We have now graphed four rows for two knitted rows of our original pattern. Row #5, graph the Red pattern set up from row #3 of our original pattern. We now have knitted two rows of Red and the next row needs to be changed to Green. Graph in row #6 the Green row from row #3 of our original pattern. Do you begin to see a pattern emerging? The first row is our Red row, second Green, third Green, fourth Red, fifth Red, sixth Green, etc until all 24 rows are completed. You will notice in Graph #2 that the first row #1 and the last row #24 have the same color for a repeat color pattern.

Graph #2

Key:

- * White in the original pattern is substituted with Green
- * Red remains the same color as in the original pattern
- * The white or blank spaces indicate needles not knitted

Knitting the Pattern on the Knitting Machine: Carriage Set Up

Holding Levers and Side Levers can work to your advantage in that it provides a means for selected needles to knit on your knitting machine bed. Knitting Row #1, starting from right to left, if you engage the carriage left Hold Lever (= position) the needles in B position will knit but the needles in E position will not. Select the first color to knit in B position (Red) and place the remaining needles to be knitted in row #2 (see graph #2) in E position (these will knit your second color). Knit across from right to left. Notice that the needles in B position knit but the needles in E position did not. Change your yarn color in the carriage to your second color or White. In row #2, the needles in E position should knit the second color, but not the needles in B position because they are already knit. Set the next row on your carriage to knit the needles in Hold position or E, and not knit the needles in B position when knitting from left to right. Your right Side Lever should be on 2, so that needles in B position do not knit. Set you right Hold Lever to knit needles in E position (-). Knit from left to right and notice only the needles in E position knit. This will be your carriage set up for knitting the remainder of the pattern. Remember your set up and choose the needles accordingly. Knitting from right to left the needles in B position knit. Knitting from left to right only the needles in E position knit. Following this rhythm and changing your yarns every two rows, your pattern knits efficiently and quickly. Notice that your row counter reflects the rows numbered on your second graph. Remember you need to knit 25 to 31 rows. Because you are now knitting two rows for every one row of your actual pattern, (graph #1) do not forget to double this amount (graph #2) to match your row counter and make a note in pencil on your pattern as a reminder.

I hope this information has been useful to you. Happy Knitting!

Email any questions to: Jsag77@cfl.rr.com

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