

# Tips & Techniques!

## Tips & Techniques #7

### 4.5 MM MACHINES SINGLE BED KNITTING WITH THE YC-6

The YC-6 is supplied with a set of ribber clamps to elevate a single bed machine to the correct angle. Once the machine has been elevated, reverse the auto tension pole so that the bend angles towards the front of the machine; then mount the four color auto tension unit at the hole marked "B". Attach the yarn changer to the left end of the bed and make sure that it is set in the upper position for single bed knitting. The tension discs on the YC-6 auto tension are more tightly adjusted than those on the regular unit to prevent looping each time the carriage travels to the extreme left for color changes. If you leave both the standard auto tension and the four color unit on the machine all the time, be sure to make a note of which one you use to knit swatches and then use the same unit to knit the garment. Don't switch back and forth between the two or your gauge will be off. For all of the following methods, begin with the carriage on the left, at the yarn changer.

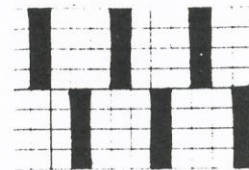
#### STRIPES

Stockinette stripes are a perennial favorite - especially for men's and boy's sweaters. What makes one stripe more appealing than another? Color is important, but it is really proportion that gives stripes their punch. You can also add interest by varying texture, stitch size or cam settings. Remember, you can automatically alternate any two yarns at a time with the YC-6. If you want to work with three or four color stripes, you must trip the additional colors manually. Get into a rhythm of always tripping the next color while the carriage is on the left (or right) so you don't lose your sequence if the phone rings! To knit with more than four yarns, use the basic auto tension as well and just catch the extra yarns on the left end of the bed to change them manually. Tighten the tension on the two color unit to prevent looping at the left edge.

#### STRIPES & TUCK STITCHES = COLORFUL TEXTURES

When you combine stripes with tuck stitch,

you'll get some interesting surprises because of the way the tucks pull up the color. The same pattern will look different knitted with two colors striping than it will with three or more colors in rotation, and the number of rows per color will change the pattern as well. The following pattern is a good one to experiment with and is supplied with most machines.



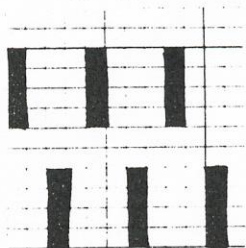
For electronics, fill in the card as illustrated; for punch cards, punch white spaces, repeating the design to fill the card.

In this example, every fourth needle is repeatedly selected for four rows, then the alternate fourth needles are selected for the next four rows. (You could change this pattern by varying the spacing of the selected needles or the (even) number rows they are selected.) Try these variations with the cam lever set to Tuck, except as noted.

1. Two colors: 4 rows each color to produce vertical stripes.
2. Two colors: 8 rows each color to produce horizontal zig-zag stripes.
3. Two colors: 12 rows each color to produce wide zig-zag stripes.
4. Two yarns: elastic and cotton, etc. Knit 4 rows each yarn. This is great for the bodice of a sun dress, cuffs, etc.
5. Three colors (A/B/C/A/B/C): 4 rows each color for a colorful diamond pattern.
6. Three colors: 8 rows each color for wide zig-zag horizontal stripes.
7. Two color bubble stitch. \*Knit 4 rows tuck with color A. Stop card and knit 2 rows stockinette with color B.\*\* Repeat from \* to \*\*. (This is much faster and easier to knit with a punch/design card that includes the two rows of stockinette so you don't have to keep



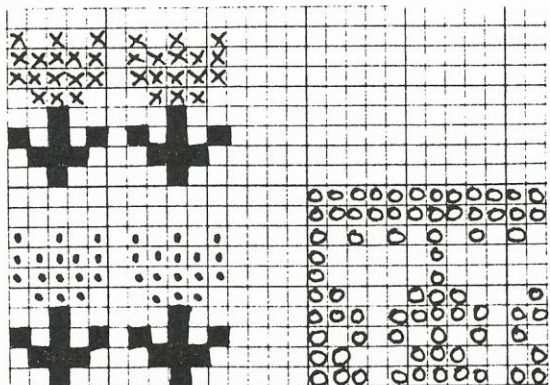
changing the cam lever.



If you want to experiment with other pattern cards, the number of times the rows in the design repeat may suggest some color sequences. That is, if the same needles are repeatedly selected for six rows, base you repeats on multiples of six.

### FANCY FAIR-ISLES

the YC-6 is great for knitting all the traditional, multi-colored fairisle designs, or repeating borders that change color each time. For example, you could knit a border of yellow tulips, followed by a border of red tulips, complete with green leaves, all on a white background. Just make sure there is an even number of rows of each color. The single bed for the YC-6 has two yarn feeders. The #1 yarn feeder is open and can automatically change colors on the left. The #2 feeder is closed and the color cannot be changed. Therefore, you want the #2 color to be background (constant) and the #1 color to be pattern (changing for each repeat or border). This is contrary to the way you knit fairisle with the regular knitter arm where #1 is background and #2 pattern. Therefore, any of the punch cards you use for fairisles will need to be re-done; punch all of the background holes, rather than those for the pattern. On the electronic machines, simply knit with the right #1 light to reverse the selection (and mark the buzzer column to tell you when to change colors!). This is a specialty of the YC-6!



"For electronics, draw 1 flower and mark card for a 10 row repeat with buzzer markings at rows 4 & 8 to signal color changes. For punch cards, repeat design to fill the card, punching white spaces only."

### MOSAIC PATTERNS

Your knitter manual shows an example of two color Slip and Tuck knitting using the triangle pattern that came with your machine. Instead of knitting the pattern in fairisle, you simply use the tuck or slip cam setting and alternate two rows of color A with two rows of color B and get a pattern that barely resembles the original. Magic? No! Many patterns can be knitted as mosaic patterns if you knit each row of the design twice, in the same color. That is: [row 1, black (2x1)], [row 2, white (2x1)], [row 3, black (2x1)], etc. The triangle pattern is used as the example because each row of the design has been punched twice. Other designs can be used for this method by using the "L" knob on punchcard machines or the #3 light on electronics, starting the carriage on the left. For punchcards, knit the memory row from right to left with the knob on "S" and the card locked; then, turn on the card and flip the knob to "L". For the electronics, with the carriage on the left and the inspection light on, press button #3; then turn off the inspection light. This is to make sure that the card changes as the carriage moves from right to left enabling you to knit two identical rows starting on the left. If the card rotation does not coordinate with the color changer, you will simply get stripes. Incidentally, the #3 light on the SK-500/SK-560 does not coordinate with the color changer so you must draw each row of your design twice.

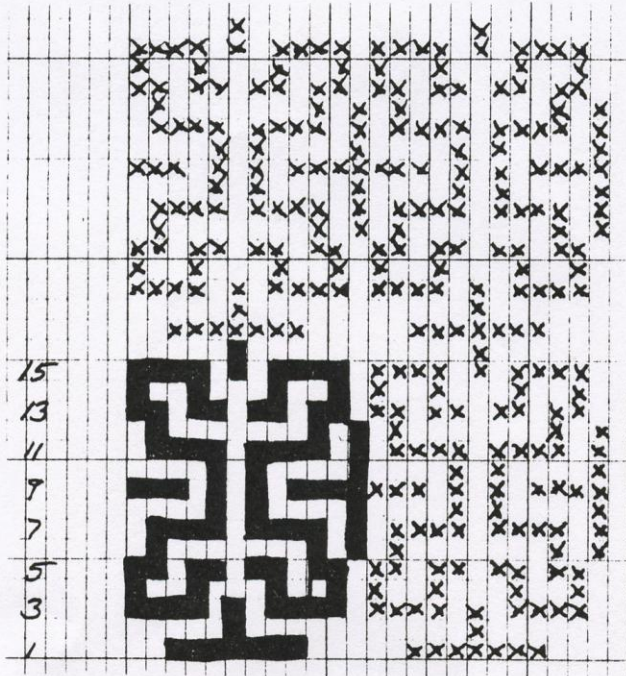
Many patterns can be used for either tuck or slip mosaic, but tuck limits you to patterns with no more than two adjacent needles tucking. The tuck fabrics tend to be wider, softer and more textured; slip fabrics tend to be more stable. The beauty of this method is that you can knit patterned fabrics that have almost no floats to worry about.

While you can experiment and knit existing cards as mosaic patterns, it is also possible to design specifically for this method, as outlined below. For additional information, check out Barbara Walker's Charted Knitting Designs (pg. 185) or Susanna Lewis' Machine Knitter's Guide To Creating Fabrics (pg. 71).

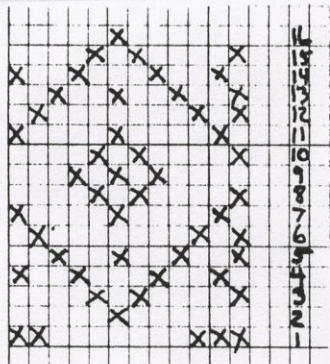
### Designing Mosaic Patterns

1. Most mosaic patterns tend to look like mazes or lattice patterns, with the dark squares only one square wide and high. Draw one that you like and mark one full repeat in each direction. This shows you what the pattern will look like when it is knitted, but not how to punch the card.





2. Make a new chart to represent the punch/pattern card:  
 For row #1 and all odd numbered rows, marking only the position of the white squares. For row #2 and all even numbered rows, marking only the position of the black squares. (For designs that have more black than white squares, you might want to reverse this.)



3. To punch or mark the actual card:  
 For punchcard machines, punch only the white squares of chart 4b. Knit with cam lever set to slip or tuck. For SK-500/560, draw each row of the design in chart 4b twice. Knit with the right #1 light, cam lever on slip or tuck.

For SK-580/890, draw each row of chart 4b once; knit with right #1 light and #3 light as described earlier for either slip or tuck.

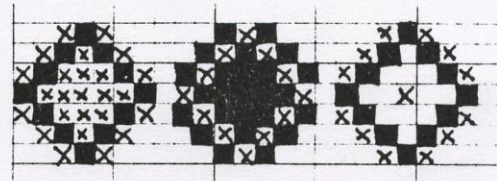
4. Note that the punch/design card does not resemble the knitted fabric. These cards can also be used to knit fairisle, which

will resemble the design card.

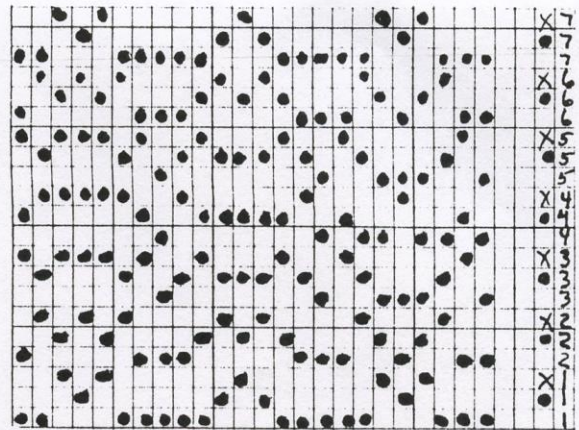
### THREE COLOR SLIP

Fairisle knitting can only utilize two colors per row with both yarns carried in the carriage at the same time. Slip patterns are knitted with one color at a time and, while slower to do, will allow you to knit three (or more) colors in each row. (Incidentally, the designing method is the same for single and double bed slip. When knitted double bed, it is usually referred to as multi-color jacquard. In either case, the cam lever is set to Slip.)

First, draw your pattern in color or use a symbol to represent each color as I have below in chart 5a. Number each row of the design.



Then, expand the design by recording each color in a separate row: [row 1, color A], [row 1, color B], [row 1, color C]. Redraw every row of your design like this to account for all three colors, in A/B/C order.



For three color designs, each row of a design requires three rows on the card, i.e. three rows of knitting. A four color design would require four rows on the card to represent each row of the design. If a given row of your design only uses two of the colors, it is easiest to just leave a blank row on the card to maintain the color sequence. (The PE-1 does these color separations automatically. (See the manual.)

In order to use the YC-6, you will have to knit each row twice, beginning on the left. For punchcard machines, punch the black



squares of the design and knit using the "L" knob to expand the design. For the SK-500/560, draw each row twice and knit using the LEFT #1 light. For the SK580/890 draw each row once (as shown on chart) and knit with the LEFT #1 light and the #3 light to vertically expand the design. The electronics also allow you to double the width of the design for better proportioning by using the #4 light. The punchcard and electronic selection for this method is reversed from the normal method of Slip knitting because 3 color slip produces a knit side pattern, rather than the usual pattern of floats on the purl side of the fabric.

If you only want to knit each row once, you'll have to change colors manually after each row knits. This is simple to do with an odd number of colors, but nearly impossible with an even number of colors because the yarn will always be on the wrong side!

As with all slip knitting, isolated needles of a color may tend to float forward, causing dropped stitches or the carriage to jam. So, increase your stitch size and knit slowly; move your weights often. Also, pay attention to needles that slip for many rows before they knit again because the stitches can break if they hold on too long! For example, when you knit two rows per color, it requires six passes of the carriage to complete one row of the design. When one color knits, the needles for the other two colors are slipped. That is, when "A" needles are knitting, "B" and "C" needles are slipping; when "B" knits, "A" and "C" needles are slipped; and when "C" knits, "A" and "B" needles are slipped. Therefore, if a needle knits color A for the first row and color C for the second row, it will end up holding the same stitch in it's hook for 8 rows before it knits again. If you have problems with too many stitches like this, you can re-design your card or knit one row per color without the YC-6. (For 4.5mm machines)