Tips & Techniques!

Tips & Techniques #19

TIPS & TECHNIQUES FOR ELECTRONIC INTARSIA WITH THE AG-50
(Some of these tips are useful for "old fashioned" intarsia knitting as well!)

The bed must be flat when using the AG-50. Rather than removing the ribber after beginning each garment section, you may find its easier to start all the garment pieces with waste knitting. When you are done with the AG-50 you can remount the ribber and knit all the ribbings by rehanging the lower edges and knitting the ribs down from the garment pieces. Whenever you knit ribs this way, you can easily reduce the number of stitches from the sweater to the rib by doubling some of the stitches (two to a needle) as you rehang.

The carriage gate must be closed and weights must be evenly distributed across the fabric. Knit slowly so the bobbins don't bounce around and cause dropped stitches. Bobbins help to weight the yarn so that it doesn't pop out of the needle hooks and drop stitches. Even when you can carry a color all the way across the fabric (as for AG-50 method #2), it is better to wind the yarn onto a bobbin rather than use it directly off the cone. The weight of the bobbin helps the stitches form more uniformly.

If you need to manually move needles forward and back to wrap edges of designs or to weave in yarn ends, make sure that you place them precisely in B position. Otherwise, the carriage may knock the butts and/or jam as it tries to knit the next row.

There are no Russel Levers on any of the intarsia carriages, but you can place needles into holding position anyhow. You'll have to manually nudge needles back to C position if/when you want them to resume knitting.

You can knit both sides of a neckline at the same time when knitting with any intarsia carriage. Either decrease or hold the center neckline stitches; when using holding position to shape the neckline or shoulders with partial knitting, remember that in order to hold needles on the side opposite the carriage, you still have to work each side alternately.

When knitting with the AG-50 where each color is separately selected, the actual row count in a three color design (for example) is tripled. You need to space your increases and decreases accordingly. This is easy to do if you always increase or decrease on the same color selection, say color #1. If the directions call for an increase every 3 rows, it will actually be every 9 rows according to the row counter.

When you start a new color, manually knit the first needle or two of that group back to B position to secure the end of the yarn. The needles will remain in B position until the next time the carriage selects them. This also works with non-electronic intarsia carriages.

You may also find it helpful to use a spring

clip clothespin to hold yarn tails down and away from the carriage for the first few rows after starting a new yarn. To keep the tails from tangling with the bobbins as you work, use a latch tool to pull them through to the knit side of the fabric. They can easily be pulled back through to the purl side when you finish the garment.

All your yarn ends can be woven in and clipped close while you knit. Simply weave the end over and under about six needles. Make sure that it lies behind the open latch of each needle it weaves over and that all the latches remain open. Although this adds another step while you are knitting, it is much faster than darning in tails with a finishing needle!

Method #2 for the AG-50 is a stranded intarsia that gives a fairisle weight fabric with many colors per row. Stranding is the hand knit term for carrying yarns across a row to use again in another area. Stranding will also work on conventional intarsia carriages and is one of the most practical ways to interpret detailed designs. Small blocks of color can be stranded in any intarsia design and it usually makes more sense to carry yarns across the back than to continually start new bobbins and find places to hide all the ends. It is often used in complex handknit intarsia designs. Generally, if the length of the float would be acceptable for a fair isle design, it is suitable for stranded intarsia as well. When carrying a single yarn across a very wide area, the tension can be difficult to control. This is especially true when the path of this main yarn is constantly interrupted by groups of needles it must pass under. Rather than trying to knit the entire row at once, you may find it helpful to lay the various yarns into all the needle hooks in part of the row, move the carriage, lay in the rest of the yarns and finish knitting the row. This interrupted method insures that you have enough available yarn for take up into all the stitches. If you've tried to knit entire stranded rows and found lots of dropped stitches, it is probably because insufficient yarn was feeding in as the stitches were formed. These tightened stitches actually rip themselves out and drop as they try to knit.

If stranding produces some floats that are too long to ignore, you can handle them as you would in fair isle knitting. A single float can be lifted onto the needle hook above to knit in with the next row. When there are several floats, try latching them up and hanging the last one on the needle hook. In some instances you might want to use a separate strand of yarn (or thread) to bind the floats to the back of the fabric just as you would wrap the edges of single fair isle motif.

Intarsia methods 1 & 2 utilize the PE-1 to make the color separations that enable the AG-50 to select the individual needles for each color. Although the manual says you need the PE-1 to knit this way, you can knit these two types of electronic intarsia without a PE-1 if you are willing to make "old fashioned" color separations yourself and if your design does not exceed 60 stitches in width. The design in the example below uses three colors, each one represented by a different symbol [figure 1].In figure 2 the design has been expanded to show each color for every row. That is, color 1/row 1, color 2/row 1 and color 3/row 1. Remember that each square can only be accounted for once every three rows or your design will be flawed by a needle knitting more than one color. Because of the color symbols, you can probably still recognize the design as it appears in this expanded view. However, figure 3 shows the final separation as it must appear on the mylar design card and it bears little resemblance to the original! The easiest way to create "fractured" designs like this is to draw with colored pencils on the gauged graph paper available from your Studio by White dealer. The ex-

panded design can be traced directly onto a mylar because the grid on the graph paper matches the mylar exactly.

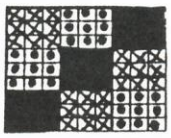

Figure 1
Basic 3 color design.

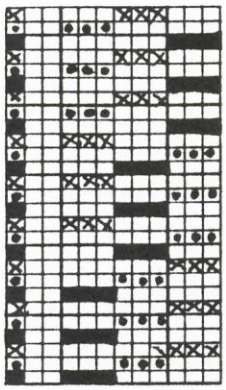

Figure 2
3 color design expanded to provide one row of the design card for each color. Every three rows on the chart equals a complete knitted row. Notice that the color order remains the same throughout.

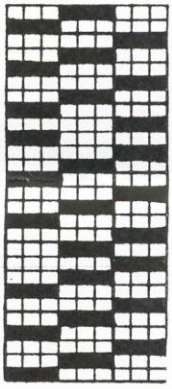

Figure 3
The final pattern as it appears on the mylar card.

The PE-1 will only shuffle 5 color separations, but as the needles are selected, it is really up to you how many colors you choose to use in each row. A design may show a dozen flowers in a single row and you can decide to knit each one in a different color. Color choices are endless!

Although the PE-1 can provide you with five color separations per row, always try to break a design down into as few color separations as possible. First of all, it is faster to design this way. But, more importantly, fewer separations means fewer passes of the carriage. While this saves times, it also saves wear and tear on the yarn.

In addition to the variety of intarsia methods that the AG-50 knits, it can also be used to pre-select needles for cabling and beading. You'll need to thread/unthread the carriage and change the cam lever from stockinette to intarsia, but a well placed mark in the buzzer column makes it all a snap to remember!

The chart in figure 4 shows a single selection for a 2 x 2 cable. You can space the cables as far apart as you like by setting the right width indicator to allow more or less space between repeats. Irregular spacing would need to be drawn out for the entire row. Knit with the left #1 light.

* Begin with the carriage on the right. Remove the yarn from the carriage to "knit" the first and second rows with the cam lever set to intarsia. The first row is actually a free pass and no selection will be made. On the second row, the carriage moves from left to right and selects the cable needles. Cross all the cables, leaving the needles in either B or C position. Rethread the carriage and set the cam lever to stockinette. Knit until the buzzer sounds and then repeat from * to **. This six row pattern requires eight rows on the design card to include the two non-knitting, intarsia rows at the start of each repeat.

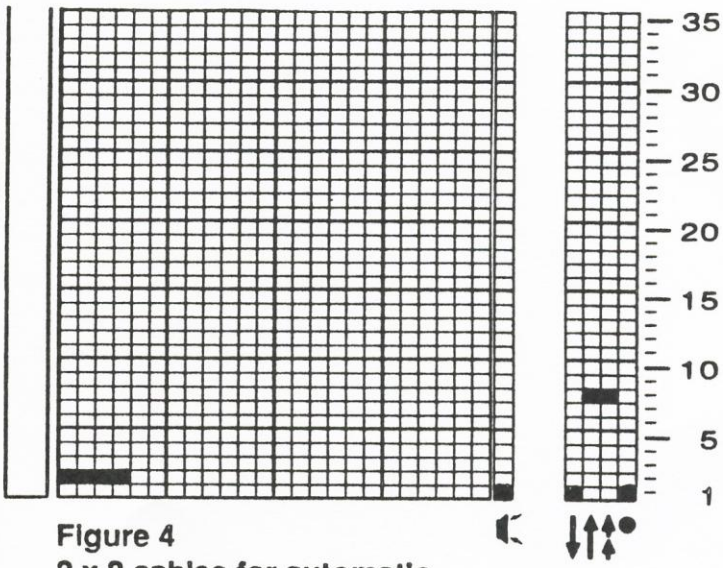

Figure 4
2 x 2 cables for automatic selection with the AG-50.