

## ***E6000 Knitting from Japanese Machine Knitting Patterns*** ***by Sandy Costa, Somerville, MA, USA***

*Earlier this year there was some discussion on the Internet about the lack of certain knitting techniques in the E6000 console. Many Duo80 knitters had been dismayed to find that there were some techniques that they used regularly on their Duo80's that did not have an equivalent in the console techniques. This led to a fascinating discussion between some of the more advanced knitters (Sandy being one of them). She stated "I have been able to by-pass custom reader card techniques simply by deciding what stitches for each row needed to KNIT, drawing each stitch in the appropriate square, and using Tech 129 and colour reverse. This will not allow for any kind of alteration however, as the technique number, I believe, keeps you out of that loop. Lock settings may be set as required."*

*You can imagine how excited that left us! Most of us sigh, and start digging up our notes from Susanna Lewis's **Drawing E6000 Reader Card Techniques** class, and prepare for several hours of hard work to get that reader card technique right, whereas Sandy analyses the stitch pattern, chooses one of her two basic techniques numbers and sits down and knits. Here is the first of a series on how to use two simple techniques to knit almost any stitch pattern.*

There are many sources for pattern design in knitting. Often, interesting fabrics are created not because of the implementation of large repeats, but through the use of varied and differing yarns and colours. At times, however, translation from one

knitting machine brand to another may be limited due to the knitters unfamiliarity with the vocabulary necessary to make the transition, and the challenge may be seem larger than it really is.

The prompts for knitting "techniques" are unique to the Passap E 6000 system. Analysis of these techniques will reveal that frequently the main difference between the console prompts consists simply in the console giving the knitter visual reminders of lock settings, and at times colour changes or racking sequences. The various technique numbers make up for the lack of directional arrow keys in the front lock. This in turn is achieved by the machine altering the method of colour separation.

Double jacquard is the most easily identified fabric design knitted by using one colour for two rows, followed by X (2, 3 or 4) number of colours, also "knitting" for two rows. "Knitting" may not actually take place on every needle. N tends to be king, and will override any console technique, and, if selected, will render a stripe whether a pattern is in use or not. To engage the patterning mechanism, one must have a design the machine recognises (whether through use of a punchcard, mylar sheet, reader card, or computer interface), the necessary lock or carriage settings, and the directional arrows keys or cam buttons engaged. Electronic machines have the added benefit of actually doing the colour separations "automatically" and tend to have a default method for doing so. Japanese machines use the method in which pattern grid row 1, col.

1 (background) knits first, followed by pattern grid row 1 and 2 of col. 2 (design), in turn followed by pattern grid rows 2 and 3 of col. 1, pattern grid rows 3 and 4 of col. 2, etc. Each design row is actually being knit only one time, leading in turn to less design elongation. The Passap default is to separate col. 1, pattern grid row 1; followed by colour 2, pattern grid row 1; then col. 1 pattern grid row 2, followed by colour 2, pattern grid row 2 etc. Because each colour is carried for two rows, the total separation is in turn elongated X 2, resulting in more elongated designs. (In the E 6000, the built in Tech 179 matches the default 2 colour separation technique of the Japanese machines).

Putting aside the issue of DJ or type of stitch created, all machines operate on the common principle: selected needles knit when patterning is in use, resting needles will perform the function as determined by lock or carriage setting, i.e. if the carriage is set to slip (tuck), selected needles knit, unselected needles slip (tuck).

The ability to see knit stitches as punched holes or squares, and no holes or blank squares as tuck or slip stitches actually frees us from any reliance on built in techniques, or for that matter of some of the special drawn reader techniques.

Those blinking reminders on the E6000 console are just that: reminders that at times need to be acknowledged with a yes or no answer. Beyond the initial set up, the machine itself lacks the ability to recognise whether we necessarily follow its directions in terms of lock settings (it does recognise if the end needles are not cleared or the card reader has reading difficulties, but those are different

issues). When it "sees" patterns, it essentially "sees" black and white squares regardless of our intent in their use. Looking at tuck stitch "technique" 129, one notices in the stitch description that 1 row of squares is equal to ONE row of knitting, each WHITE square KNITS, each BLACK square TUCKS. By using colour reverse, it will be the BLACK squares that KNIT and WHITE squares that TUCK. The design is advanced one row for each row knit. Technique 130 in turn, performs the SAME functions as 129, but for 2 CONSECUTIVE rows, enabling it to duplicate any situation that in the Japanese machines would call for double length, or to duplicate some Duomatic fabrics that call for the DECO to be set on 2. If Japanese punchcard designs are copied as given, for example, one may use T.129 and col. rev with the appropriate lock setting, or if the design is to be elongated X 2, one may draw as given and use 130 and colour reverse and the appropriate lock setting.

If the colour separation is given, the same applies. Copy and use either technique and the "correct" lock setting for the type of fabric desired. For example: if I have a double jacquard colour separation to copy from any Japanese book (the design may not be available in the console's memory, and cannot be entered as such, therefore I am using the separated file or drawing), enter it as given, use 129 and col. rev. Set front lock most commonly to slip (LX) for double jacquard. With this Technique and lock setting, SELECTED pushers/needles will KNIT, UNSELECTED pushers/needles do nothing; they are skipped.

If the knitter has a computer program to separate double jacquard stitch patterns, it will be able to do the

"Japanese" separation for any given number of colours per row, the answer is the same as above. Download the separation and use 129 and col. rev. (The E 6000 does not have the equivalent of 179 built in for 3 and 4 rows; formerly a hand drawn reader technique would have to be entered. With this method, it is not necessary). If the separation is longer than a total of 256 rows (Error 114), it may be divided in sections A, B, etc., and knit accordingly.

For tuck or slip cards from Japanese books "draw" as given and use T129 with col. rev and tuck (KX) or slip (LX) setting, or T130 if the card is to be used with elongation. See sample of Japanese tuck card, page 14.

For those making the transition from Brother knitting, it may help to note that in Passap knitting, the pusher

selection occurs in the same way that Brother preselects needles. They are brought up for the FOLLOWING (next) row of knitting (another feature that may be used in fooling the machine when rendering some other fabrics). Some cards that would have given problems if used for Tuck or Slip on the Japanese machines, and broke the needle rule restrictions, may be knitted easily on the Passap due to the use of strippers, and any of these cards may be used both single and double bed knitting.

Experimentation can lead to wonderful surprises. As a final thought I was going to add that, personally, I have great fun trying to figure some of this stuff out. The price can be however, that very little "real knitting" gets done.

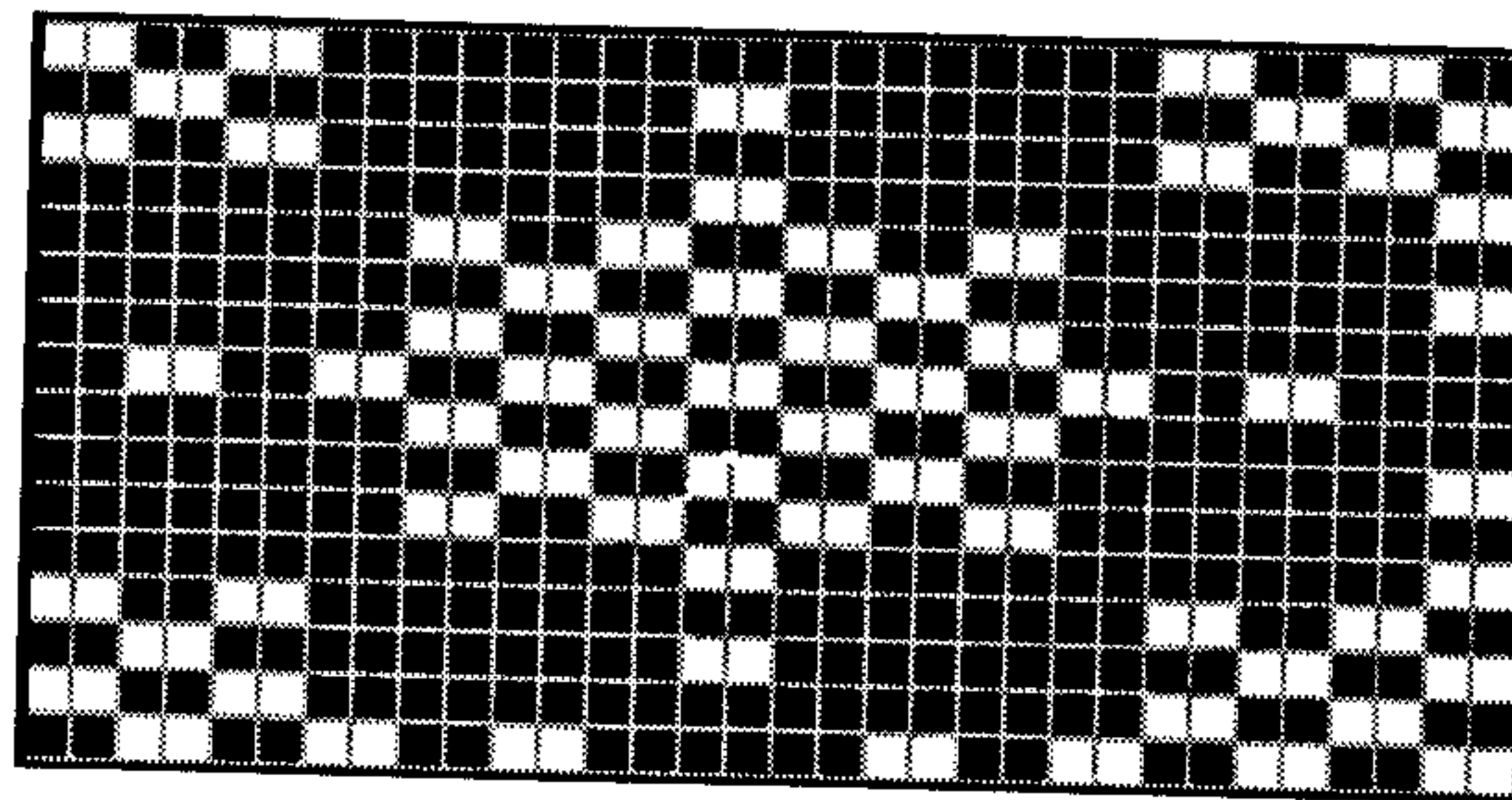


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Sample of Japanese knitting machine tuck stitch pattern, see article page 22.

