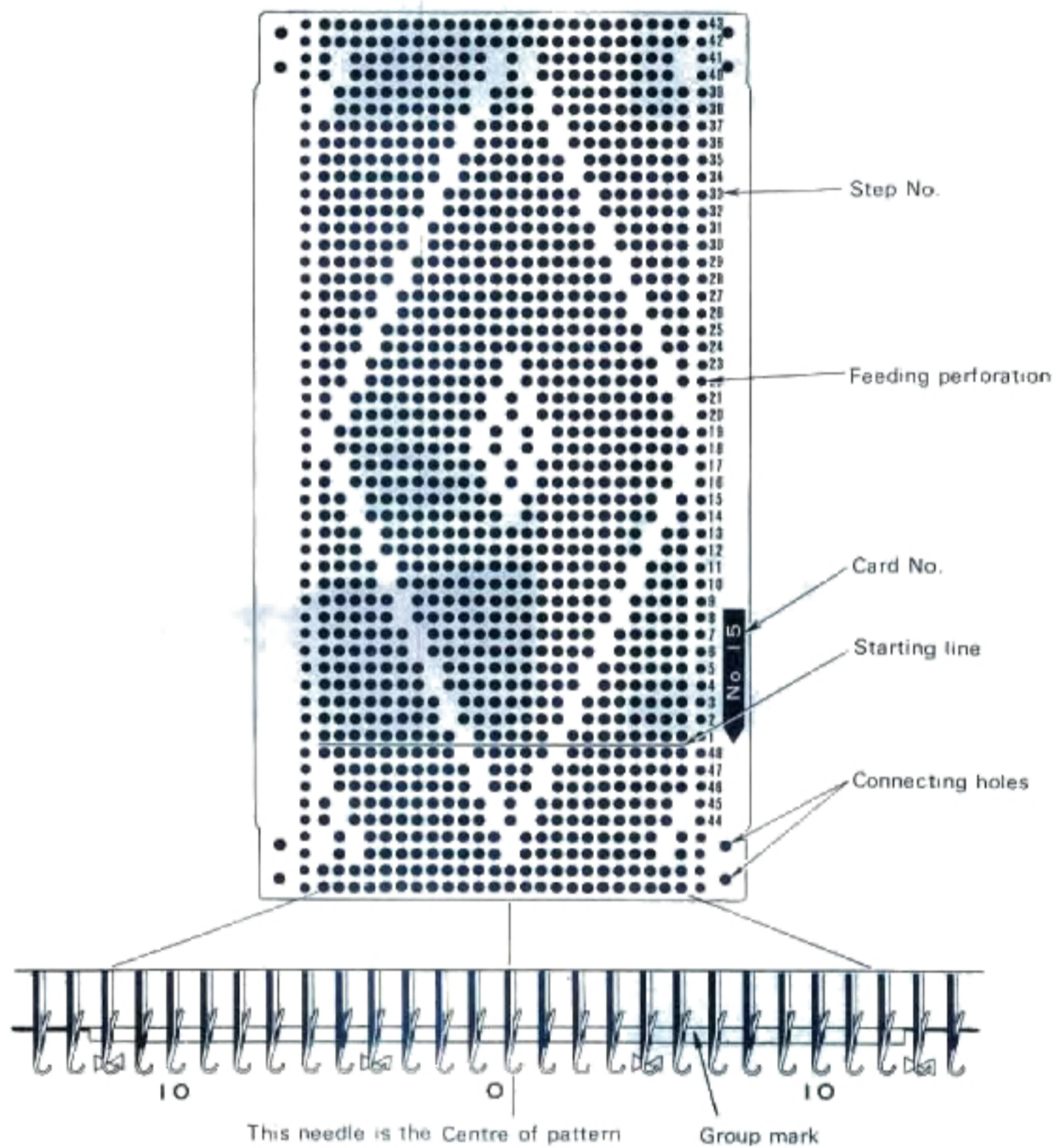


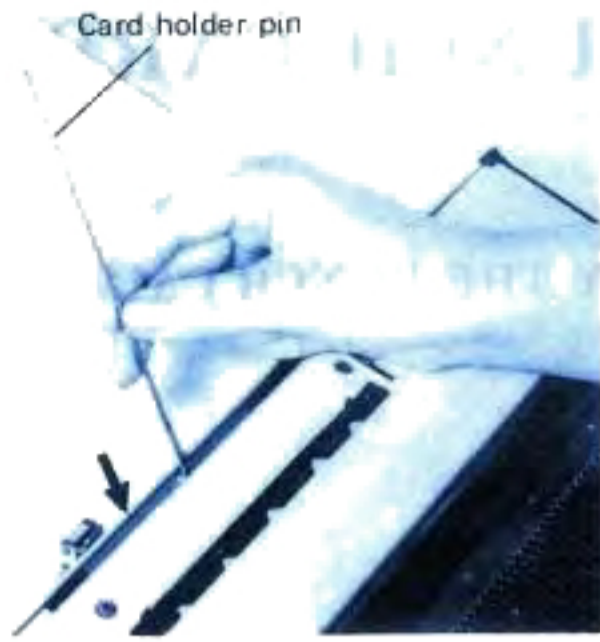
HOW TO USE THE PUNCH CARDS

WHICH NEEDLE IS SELECTED BY THE PUNCH CARD?

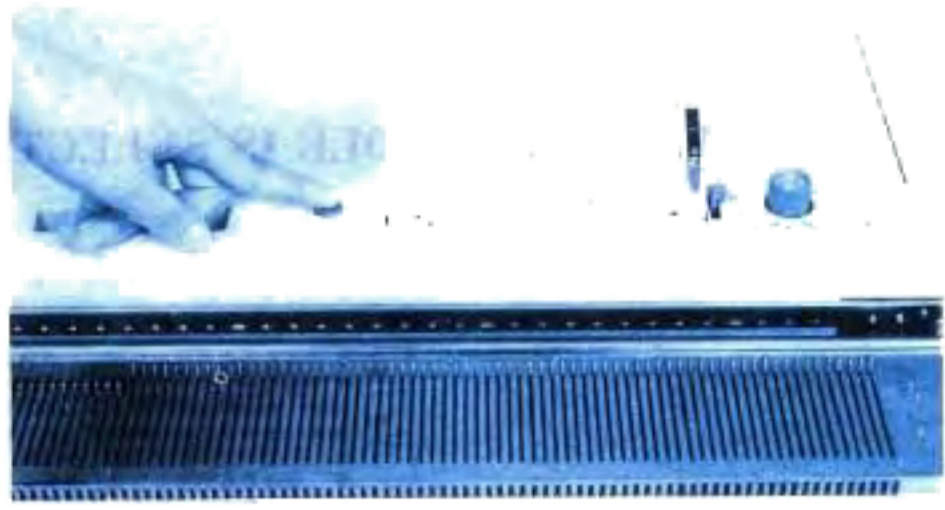


* Each perforated line of the Punch card controls a needle group, namely 24 needles, and the combination of perforations made on the Punch card will control the corresponding combination of selected needles for that step. The needles corresponding to the perforations made on the Punch card can be selected by moving the Carriage across the needles in working position.

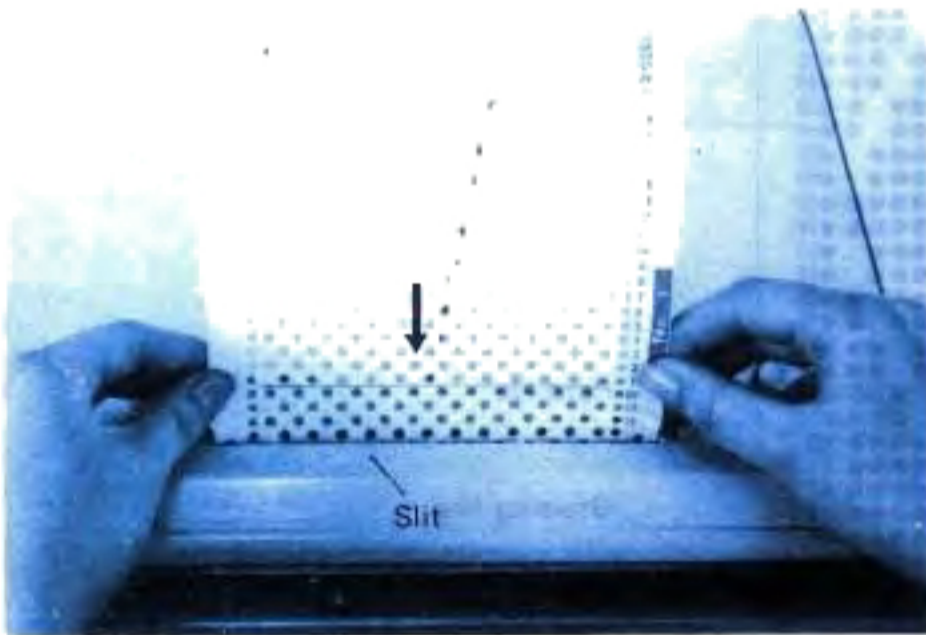
SETTING THE PUNCH CARD



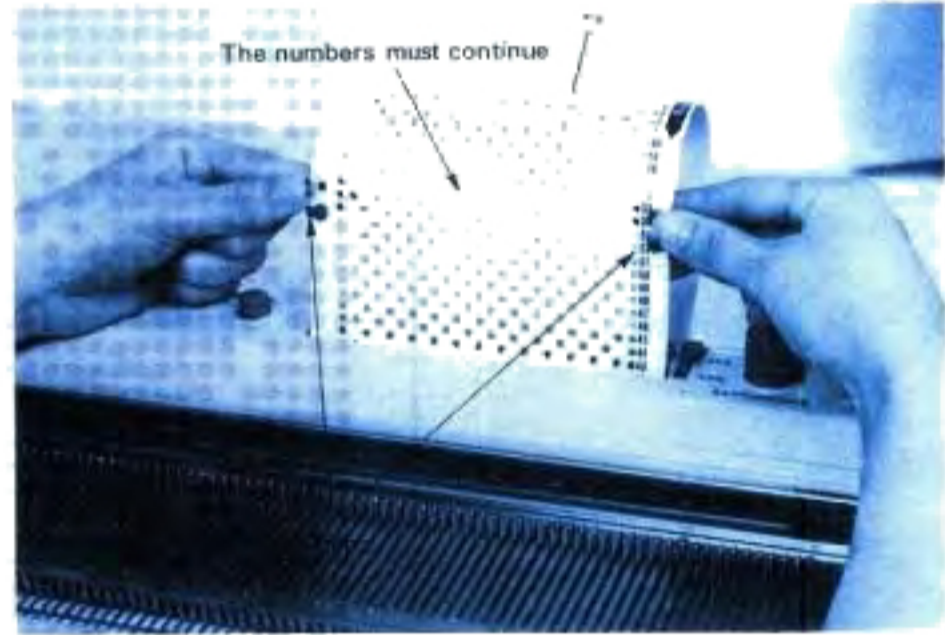
1. Insert the Punch card holder pin in the hole at the back of the knitter.



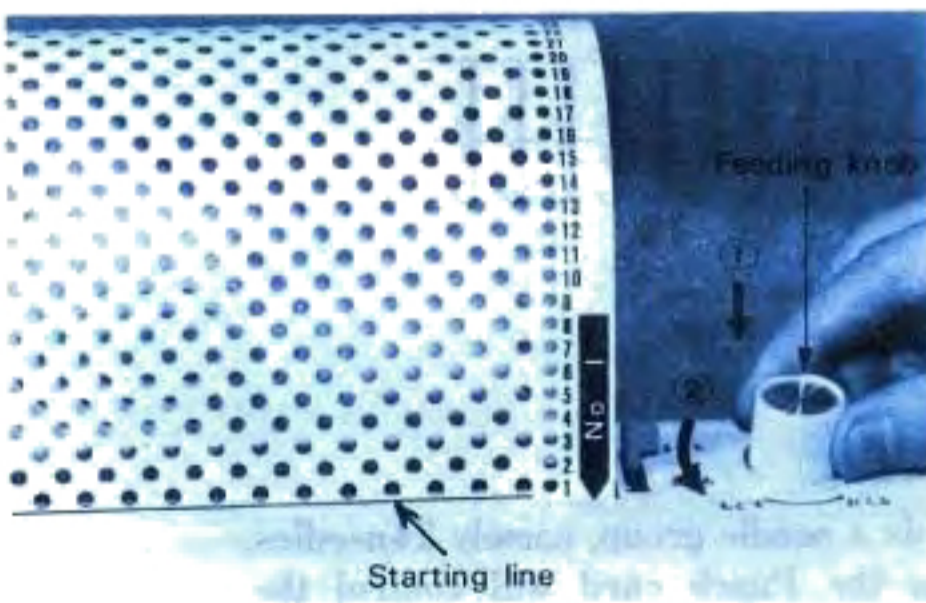
- ※ It is easier to turn the Feeding knob by pressing down the Push button at the same time.



2. Insert the Punch card into the slit with the number facing you.
Please be careful when inserting the Punch card, it should be straight.



4. When the Punch card has been inserted, the two ends must be overlapped and clipped together with the special plastic Snaps provided.



3. Make sure the Starting line is parallel to the Panel. Press down the Feeding knob and turn to left (to FEED) to feed the Punch card.

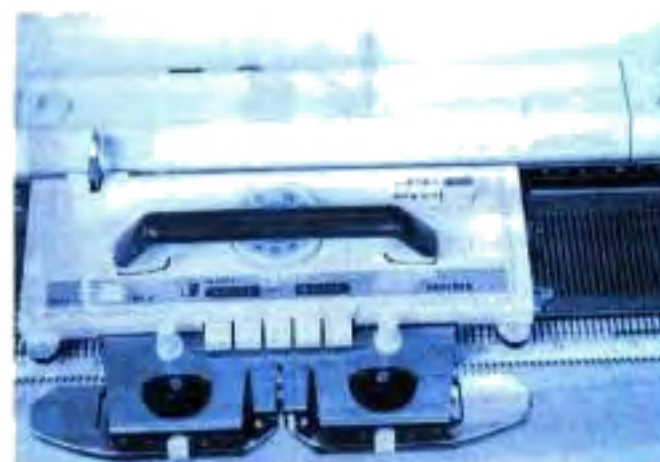


PREPARATION OF PATTERN KNITTING

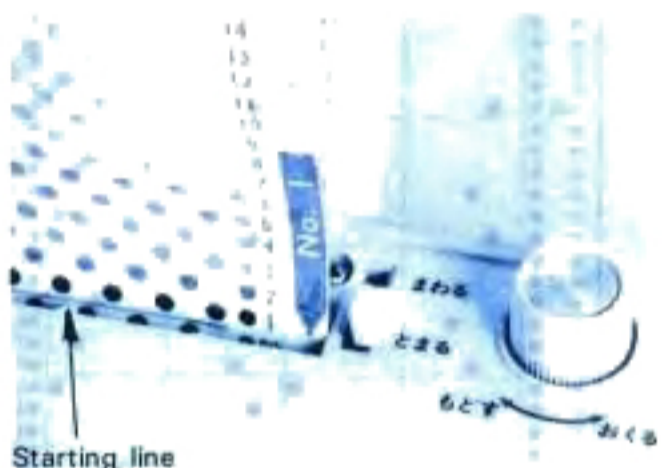
* The basic patterns



- (1) Knit several rows with PLAIN and place the Carriage on the left side of the needle bed.



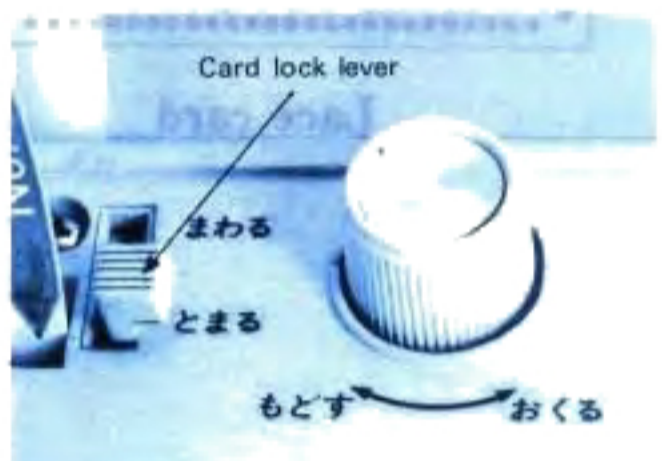
- (5) Choose the suitable tension number for the yarn you are going to knit. Number 5 or 6 is usual for medium thickness yarn.



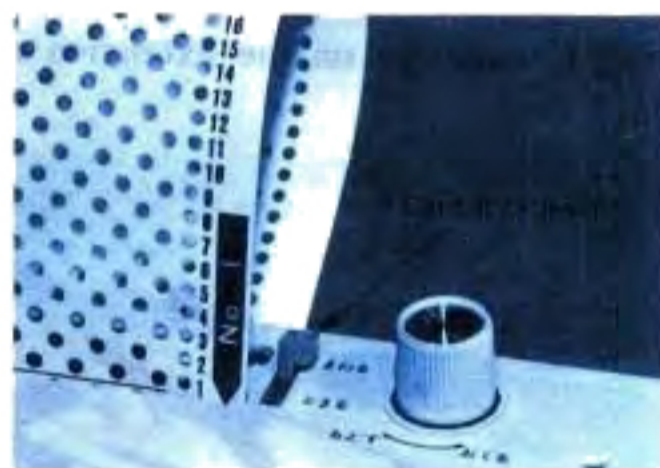
- (2) Set the desired Punch card to the starting position.



- (6) By moving the Carriage across the needles to right, the needles are selected automatically. After moving the Carriage, you will notice the arrow mark on the right end of the machine. This mark indicates the direction in which the K carriage has been moved and that the Punch card has been fed one step.



- (3) Set the Card lock lever to the "●" mark.



- (7) Set the Card lock lever to the "▼" mark.

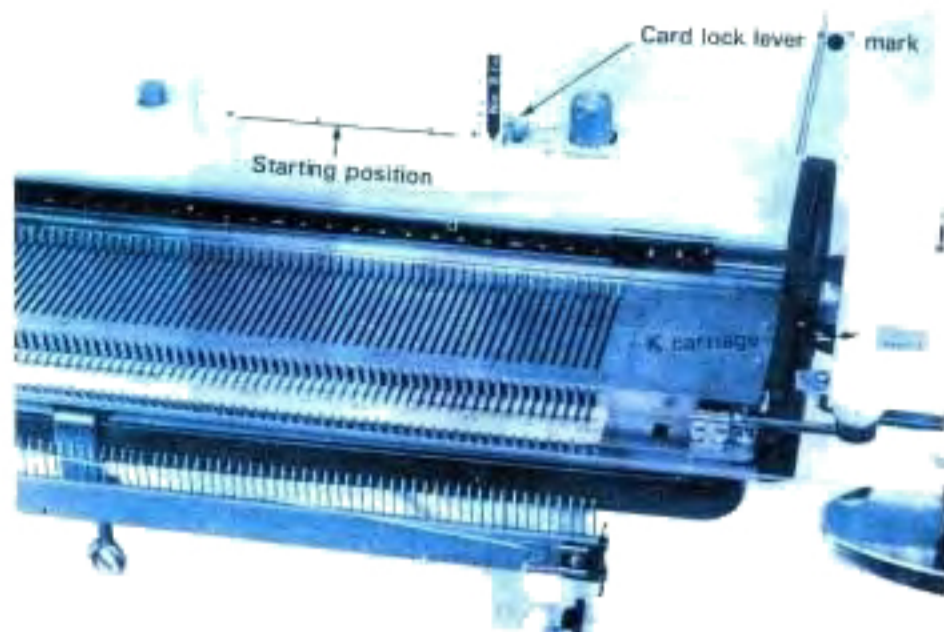


- (4) Set the Change knob to position KC for card selection.

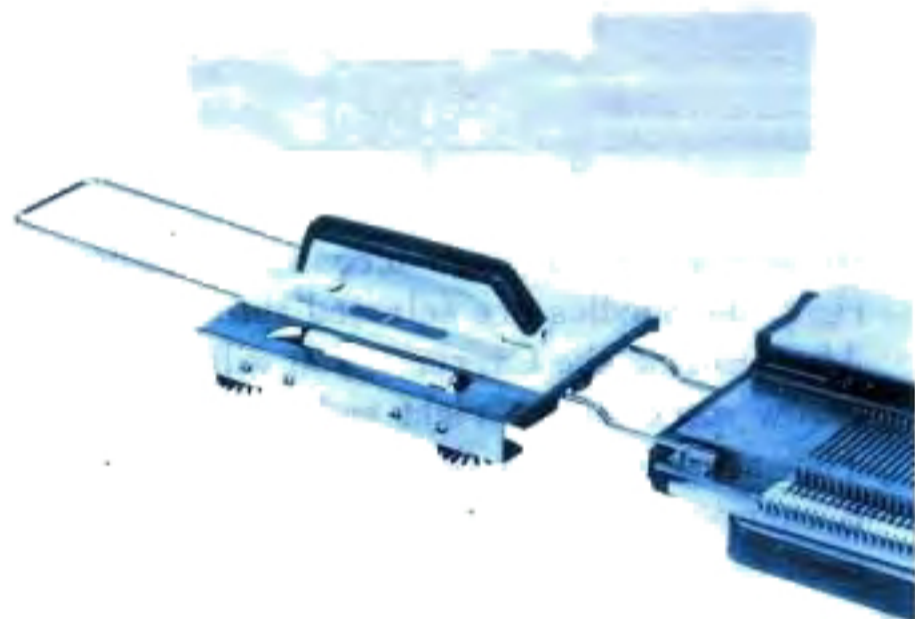
* For more details, please see the instruction manual.

PREPARATION OF PATTERN KNITTING

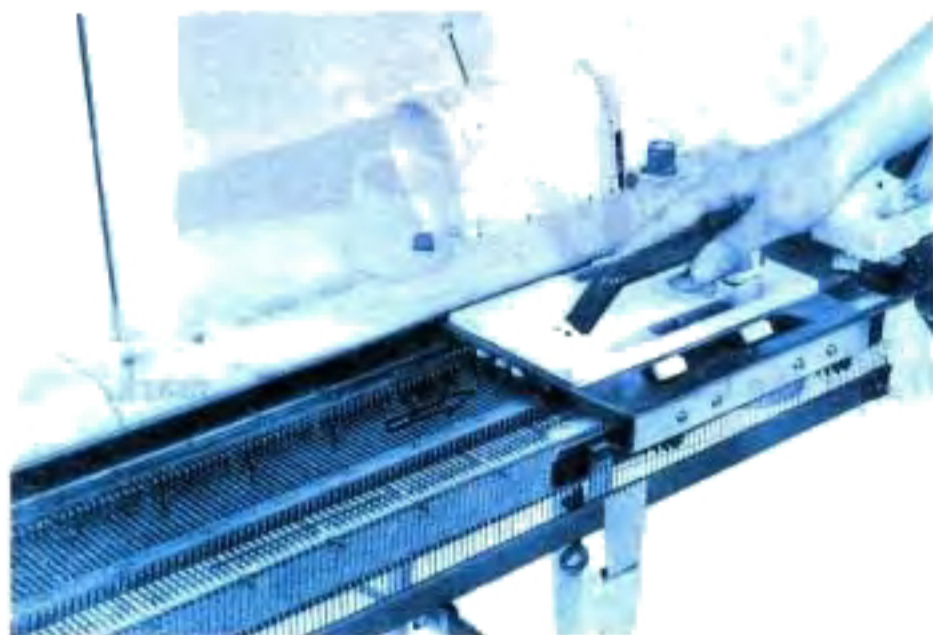
* Lace patterns



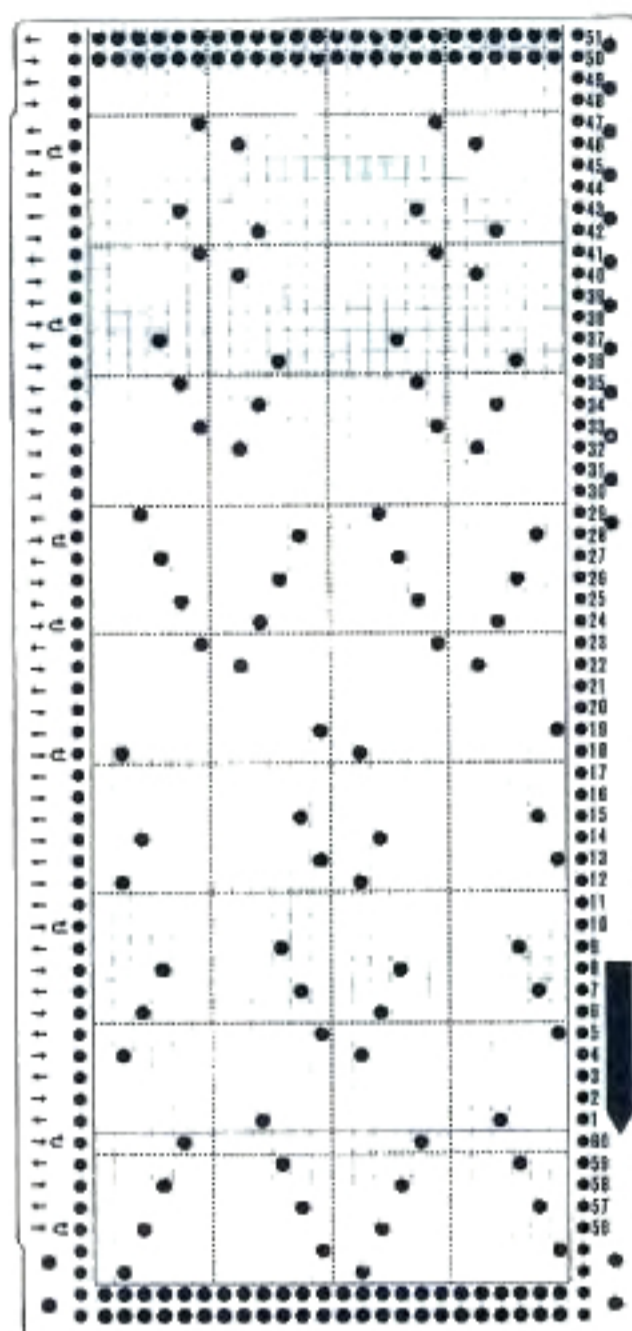
1. Knit several rows with PLAIN and place the Carriage on the right side of the needle bed.
2. Set the desired Punch card to the starting position.
3. Set the Card lock lever to the "●" mark.



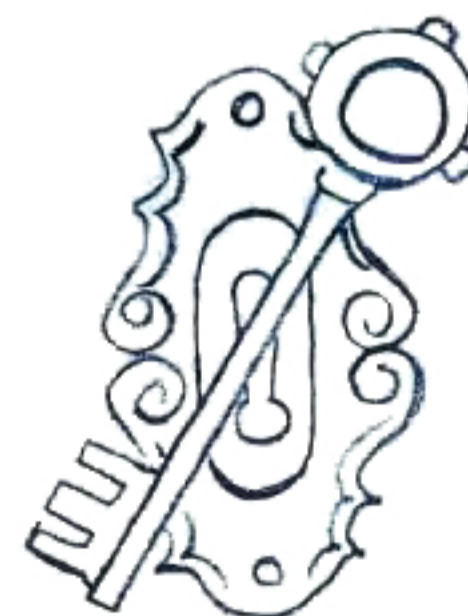
4. Place the L carriage on the extension rail of left side.



5. Move the L carriage from left to right without concerning the arrow.
6. Set the card lock lever to the "▼" mark, and continue to operate both carriages according to the direction of arrows.

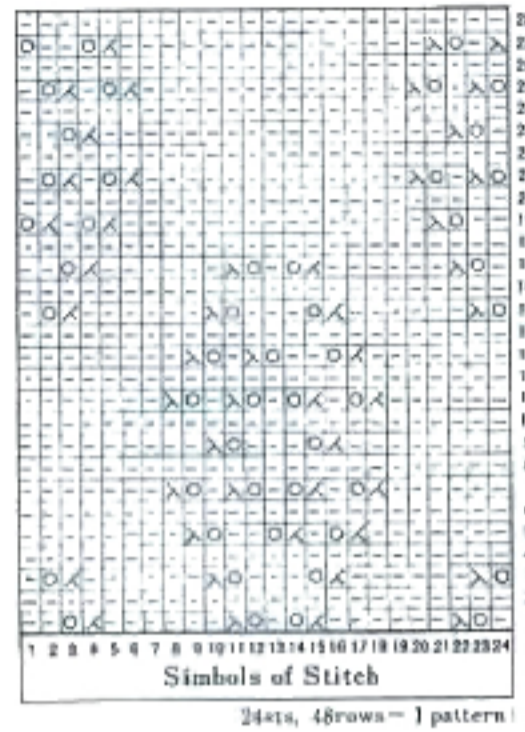
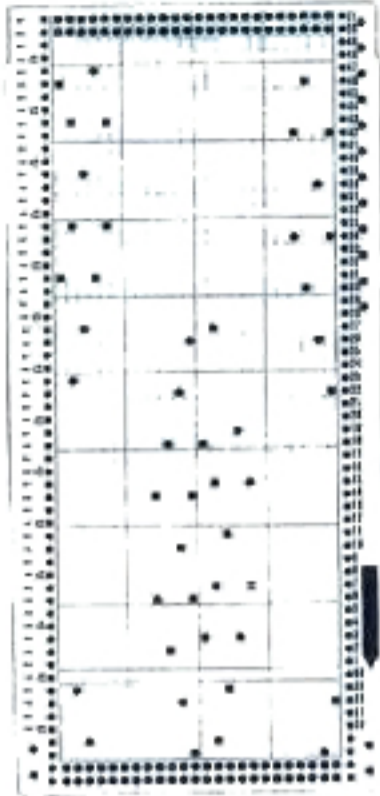


Lace card



IMPORTANT POINTS FOR LACE KNITTING

* Normal lace patterns



- (1) Make sure that the Change knob is set at N.L position.
- (2) After setting the various systems for lace knitting, operate the K and L carriages according to the direction of arrows on the Punch card.

- * The left arrow means direction of L carriage.
 - Move the L carriage from left to right.
 - ← Move the L carriage from right to left.
- * The right arrow means direction of K carriage.

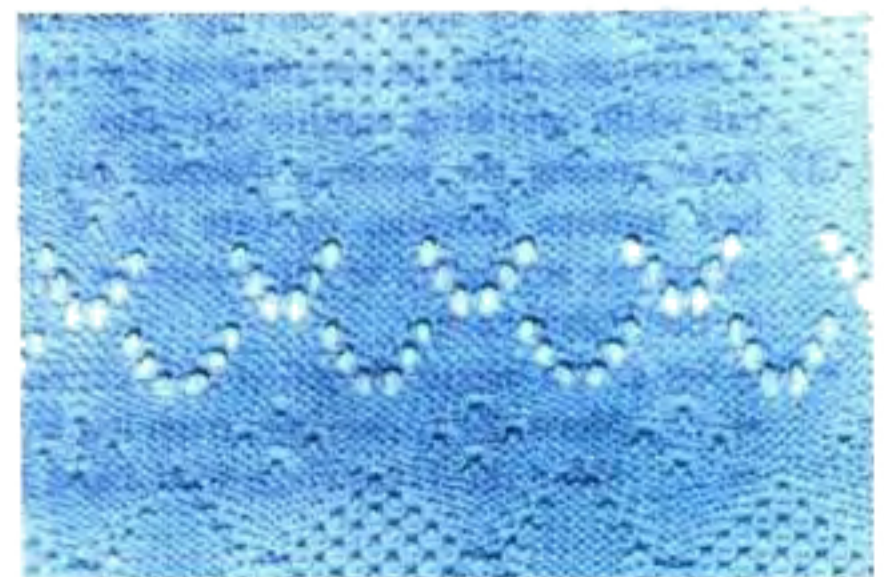
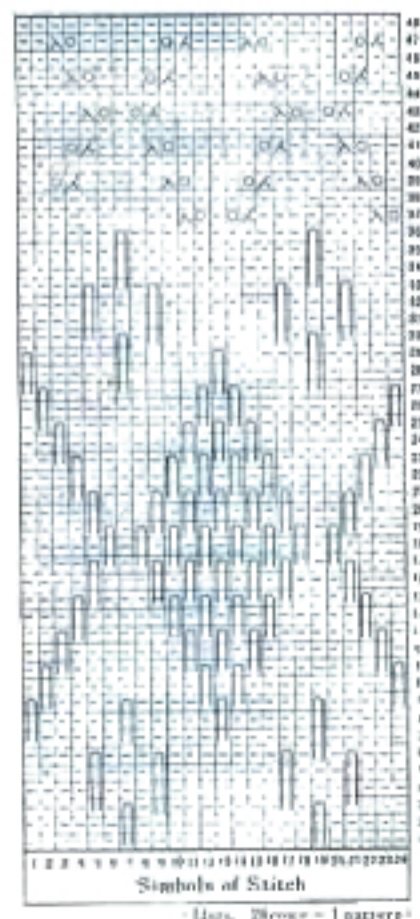
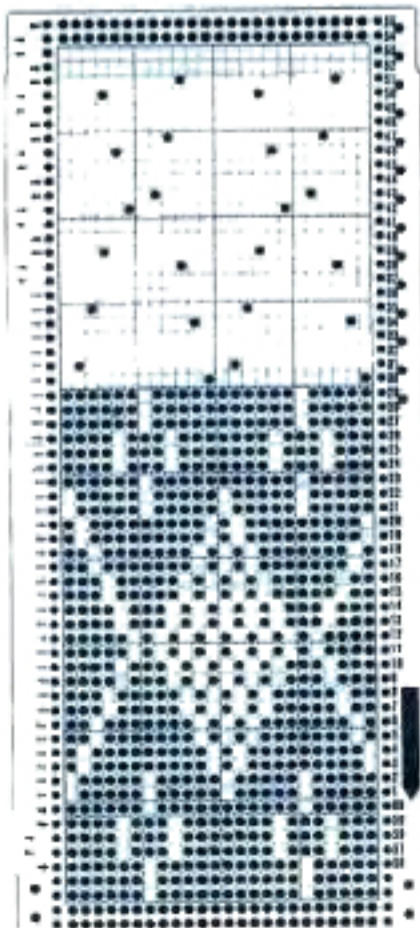
↶ Move the K carriage from right to left and come back to right.

↕ } . . . Move the K carriage to the direction of arrow.

* When the number is indicated (instead of arrow), knit the same rows as the number with PLAIN.

- (3) In the "Lean stitch lace pattern", the number of operation times of L carriage is more than normal lace patterns.
- (4) The Punch card is not fed by the K carriage movement in lace pattern knitting. Therefore, you can alter the pattern by changing the operation times of K carriage.

* Pull up lace patterns



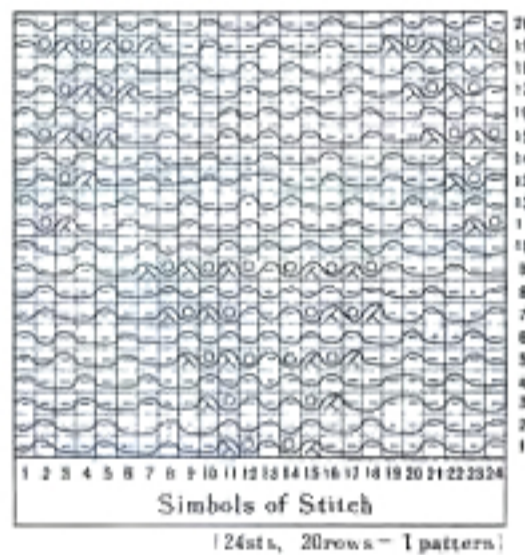
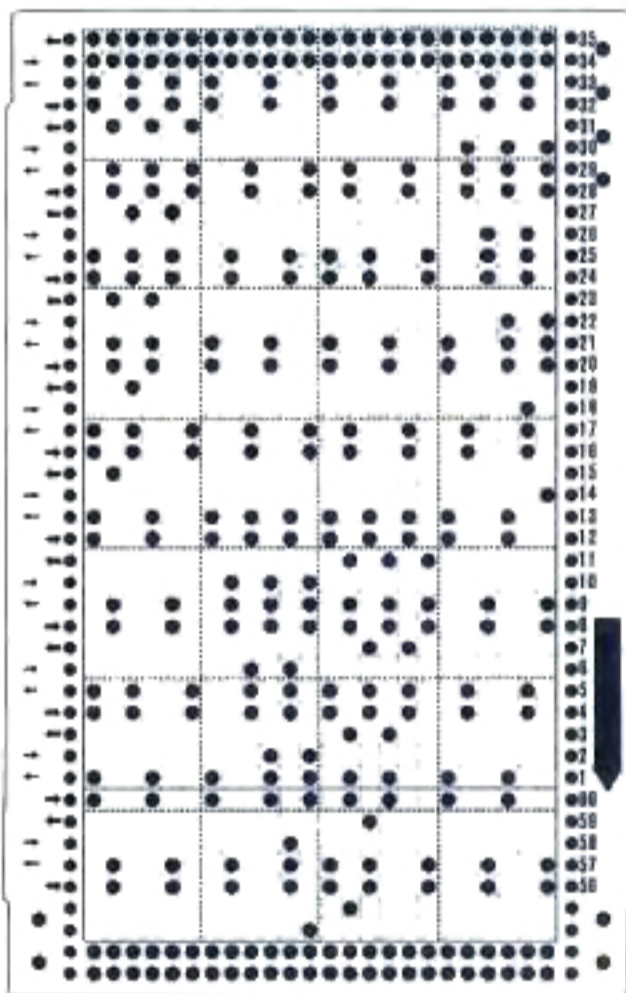
Pull-up lace patterns

- (1) Set the Change knob to position KC for card selection.
- (2) In this pattern knitting, as the needles are selected by not only L carriage movement but K carriage, place the carriage on the extension rail while operating another carriage.
- (3) After setting the various systems for Pull-up lace pattern knitting, operate the K and L carriage according to the direction of arrows on the Punch card.

* The left arrow means direction of L carriage.
 ➡..... Move the L carriage from left to right.
 ←..... Move the L carriage from right to left.

- * The right arrow means direction of K carriage.
 ←..... Move the K carriage from right to left with PLAIN button settings.
 ➡..... Move the K carriage from left to right with PLAIN button settings.
 ⇄..... Move the K carriage from right to left with depressing both TUCK buttons.
 ⇄..... Move the K carriage from left to right with depressing both TUCK buttons.
- (4) If the L carriage disturbs the K carriage movement, remove the L carriage from the needle bed by pushing the Release button.

Woven lace patterns



- (1) Set the Change knob to position KC for card selection, and set the Weaving pattern levers to W. T.
- (2) In this pattern knitting, as the needles are selected by not only L carriage movement but K carriage, place the carriage on the extension rail while operating another carriage.
- (3) After setting the various systems for Woven lace pattern knitting, operate the K and L carriages according to the direction of arrows on the Punch card.

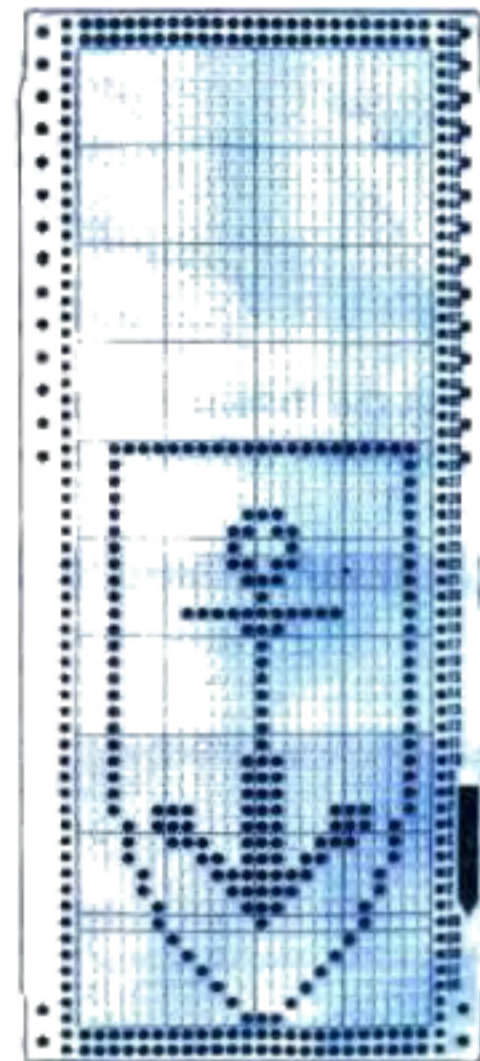
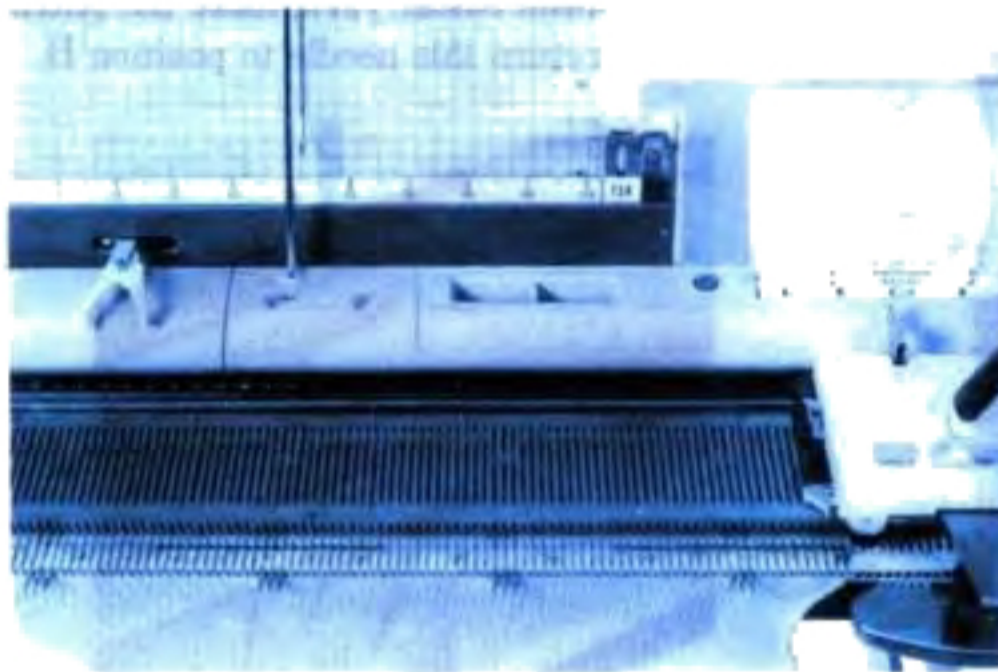
* The left arrow means direction of L carriage.
 ➡..... Move the L carriage from left to right.
 ←..... Move the L carriage from right to left.

- * The right arrow means direction of K carriage.
 ←..... Move the K carriage from right to left with PLAIN button setting.
 ➡..... Move the K carriage from left to right with PLAIN button setting.
 Before operating the K carriage, thread the weaving yarn into the Weaving yarn guide.
- (4) In the "Pulling-up method" or "Winding method", please refer to the WEAVING PATTERN section on page..... 124.
 - (5) If the L carriage disturbs the K carriage movement, remove the L carriage from the needle bed by pushing the Release button.

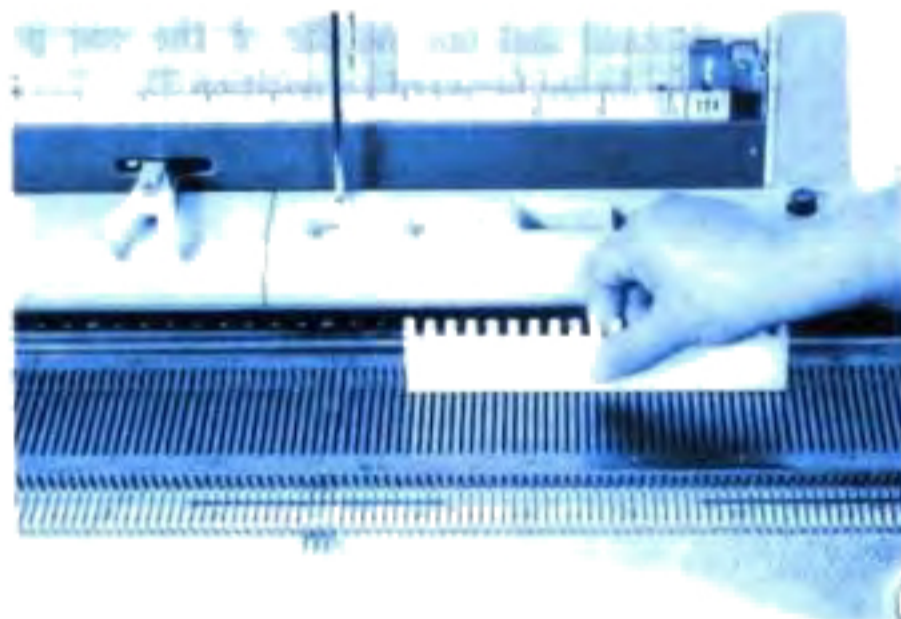
ONE POINT PATTERN KNITTING

PREPARATION OF ONE POINT PATTERN KNITTING

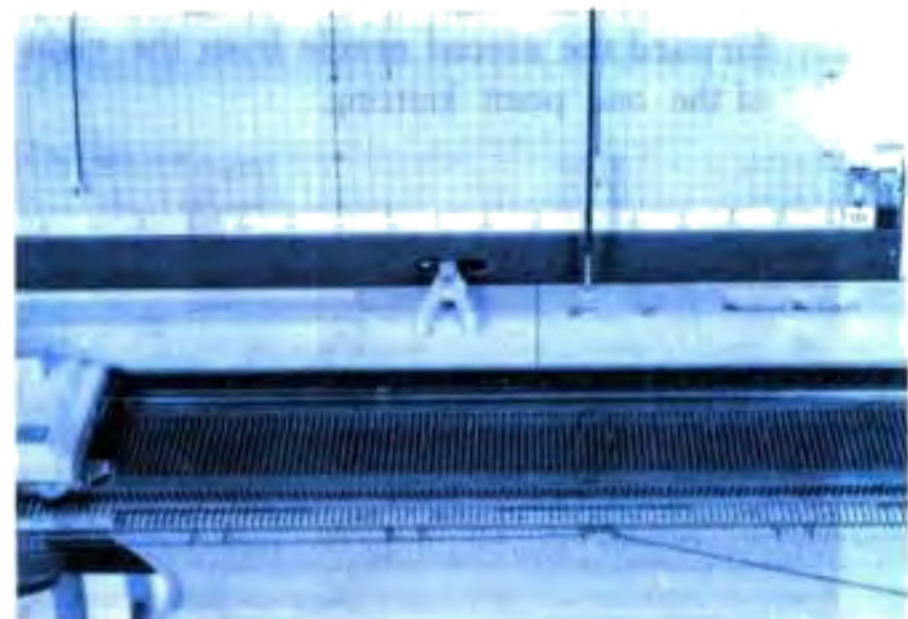
- (1) Knit several rows with PLAIN and place the Carriage on the left side of the needle bed.
- (2) Set the desired Punch card to the starting position.
- (3) Set the Card lock lever to the "●" mark.
- (4) Set the Change knob to position KC for card selection.
- (5) Move the Carriage to right to select the needles.
- (6) Set the Card lock lever to the "▼" mark.



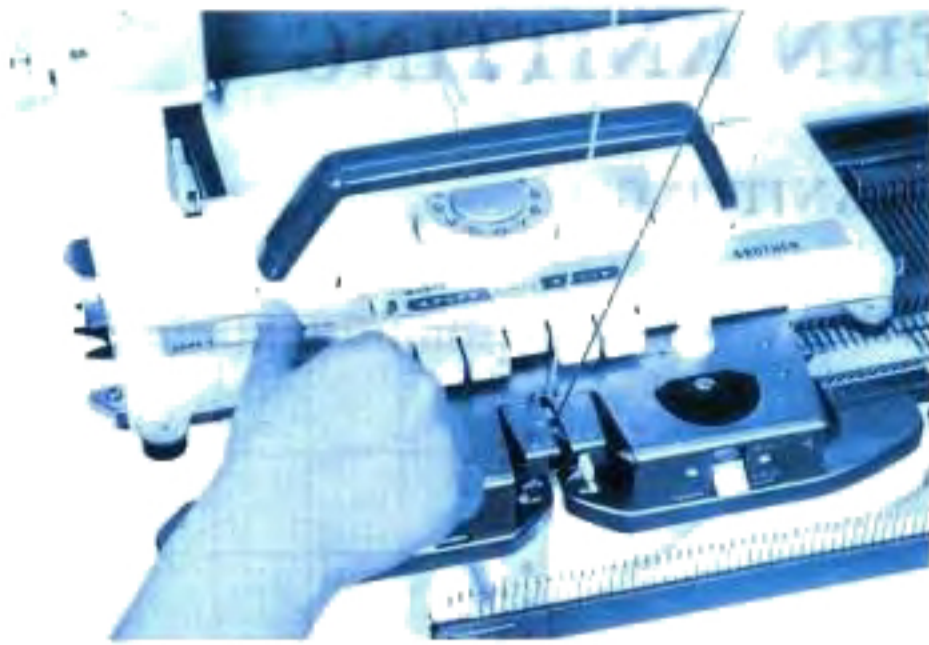
ONE POINT PATTERN KNITTING



- (1) Bring back the extra selected needles (except the needles you are going to knit) to position B by hand.
* By the needle position indicator, each needle group (24 needles) is indicated with red line.
- (2) Depress the MC button, and thread the second colour yarn into the Yarn feeder "B".



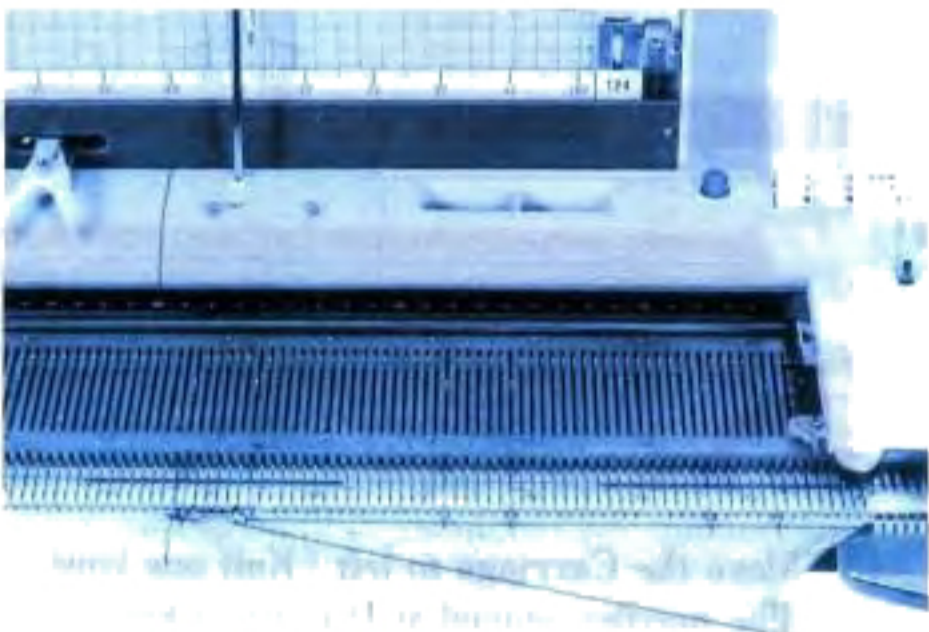
- (3) Move the Carriage to left (Knit one row).
* The needles stayed at D position knit with the second colour yarn, and after moving the Carriage, the corresponding needles are selected for next step.



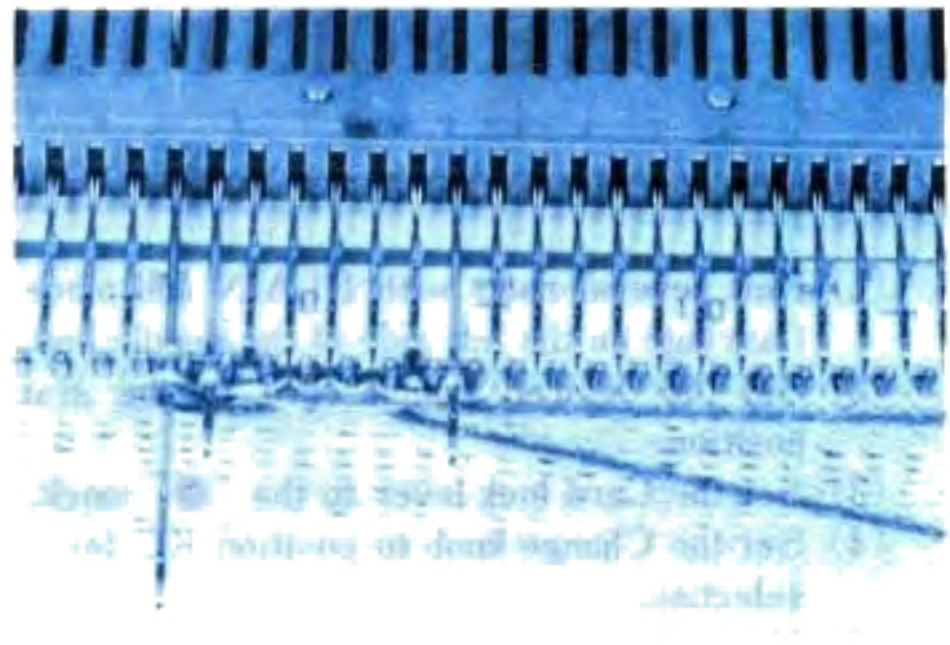
- (4) Set the Holding cam lever to H.
- (5) Bring back the extra selected needles to position B.



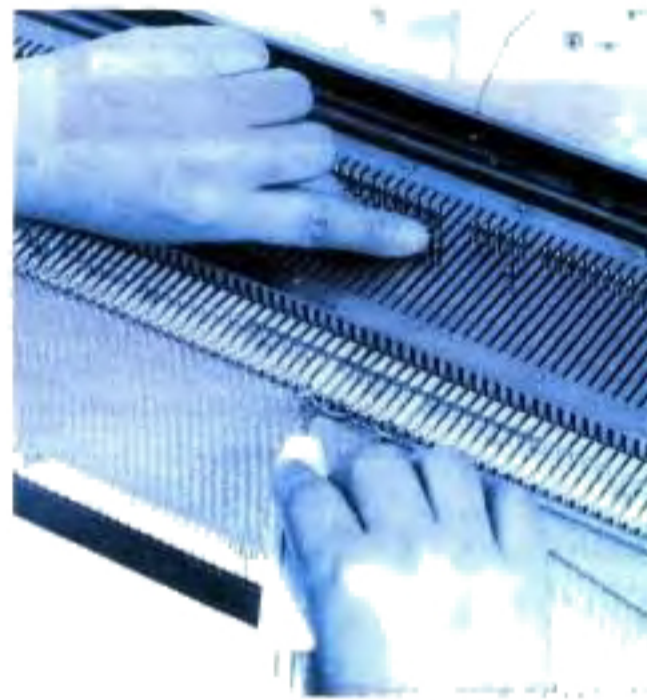
- (6) Bring forward the second needle from the left end (as the carriage is on the the left side) of the one point knitting to position E.
- * When the carriage is on the right side, bring forward the second needle from the right end of the one point knitting.



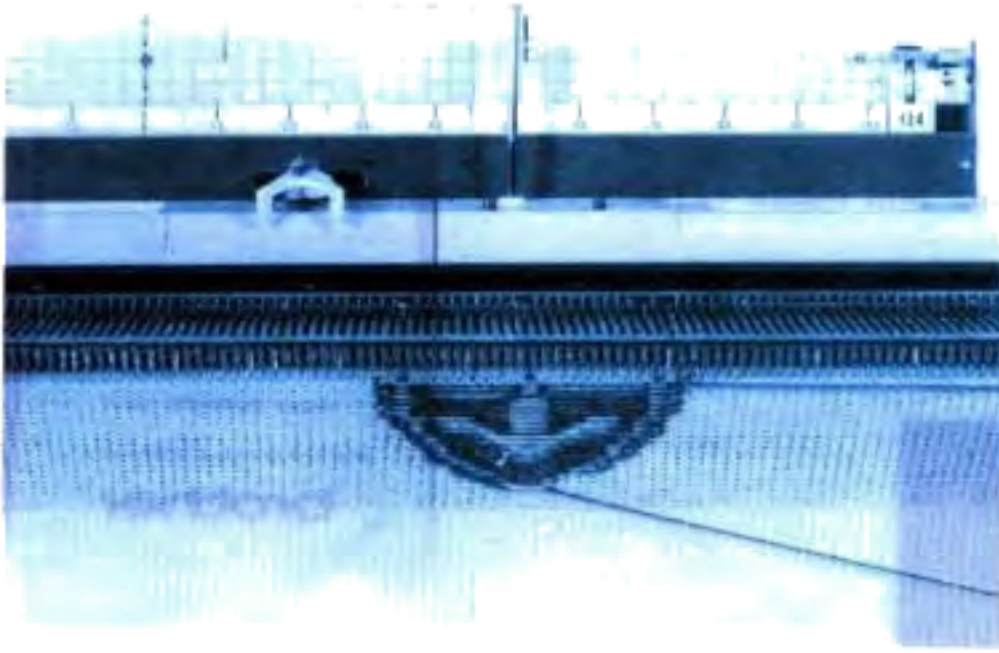
- (7) Move the carriage from left to right.
- * The needles stayed at D position knit with the second colour yarn, and after moving the carriage, the corresponding needles are selected for next step.
- (8) Bring back the extra selected needles to position B.



- (9) The main colour and second colour yarns hang on the needle in position E.
- Using the main colour yarn, make the stitch by hand, and return this needle to position B.



- * If this needle is the selected needle by the punch card and one needle of the one point pattern, bring forward to position D.

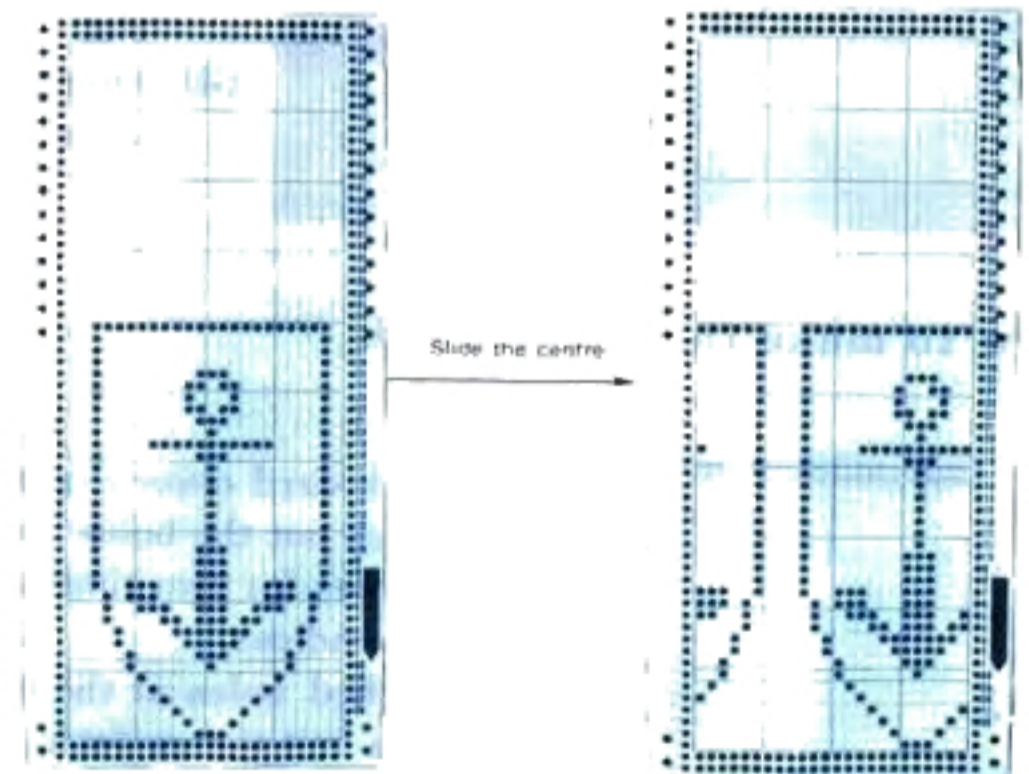
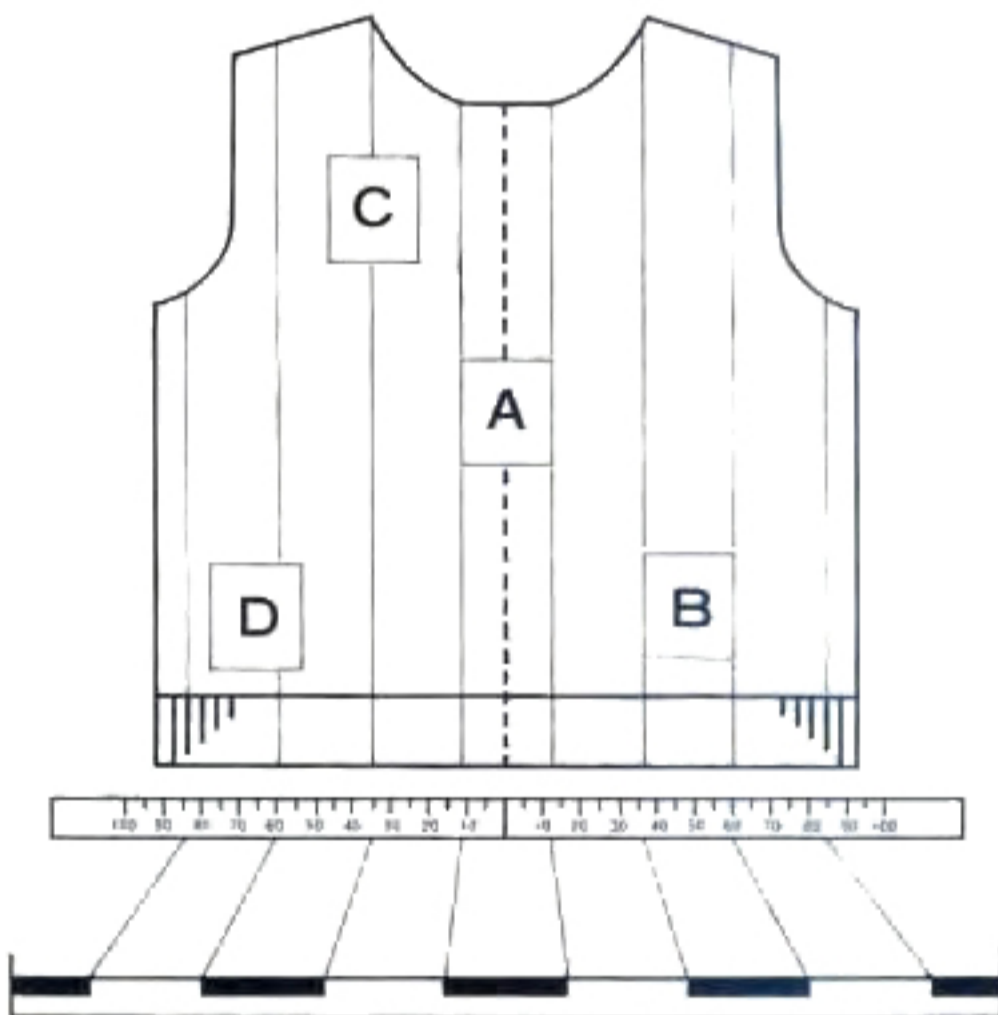


(10) Repeat the steps (6) to (9) to knit the one point pattern.

LOCATION OF THE ONE POINT PATTERN

The centre of the punch card pattern is located at the centre mark "0" on the needle position indicator. And each needle group (24 needles) is indicated by bold-line and fine-line mutually.

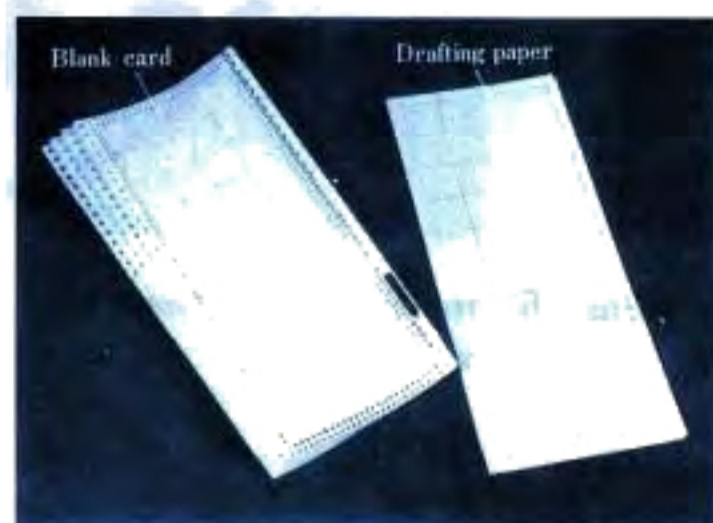
For example : When you want to put the one point pattern into the position A or B, no adjustment is required. But concerning C and D, slide the centre of the punch card according to the request.



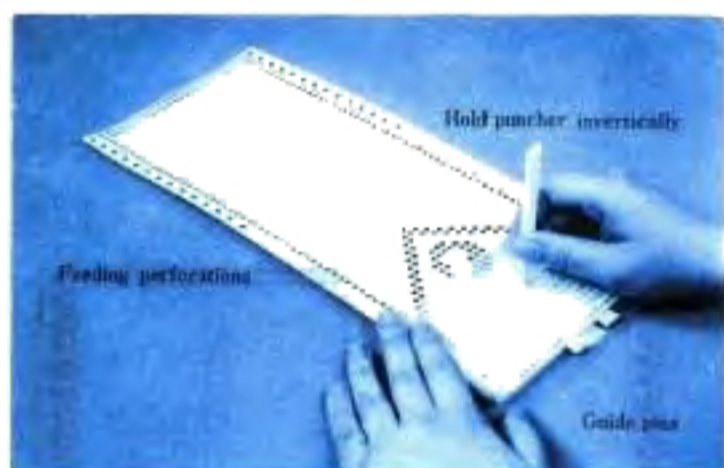
HOW TO MAKE THE PUNCH CARD

BLANK CARD AND PUNCHER SET

You can make the punch card by using the puncher and blank card.

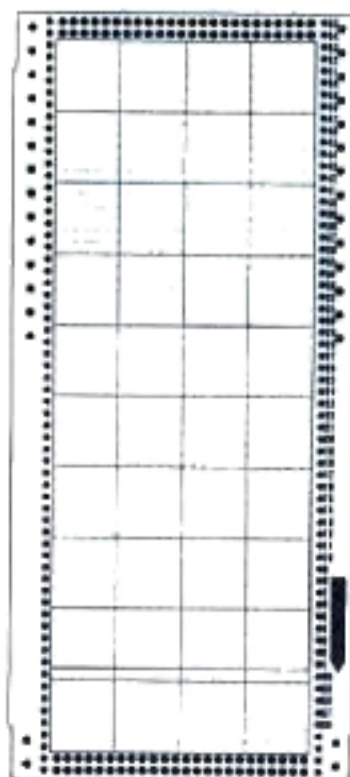


How to use the puncher and punch out the holes.



- (1) First, mark on the Blank card according to the pattern which you want to knit.
- (2) Set the marked card on the Card holder base, and adjust the feeding perforations to the Guide pins of Card holder base. Put the Puncher guide plate over the card.
- (3) Punch out the marked blocks on the card by pushing the puncher vertically as far as it will go then take it off.

How to make the punch card.



- * The Blank card covers up to 60 rows of pattern. Thus, in case of 60 rows in one pattern, punch out the holes for one pattern. But, in case of 30 rows in one pattern, punch out the holes for two times of pattern, and 15 rows. . . . 4 times, so that you can use the card like endless.
- * Pre-punched holes at the bottom and top of the card are used for coupling.
- * When you knit the pattern, set the starting line (Step No. 1) to the fixed place, but start to punch out the holes from bottom of the card.
- * The center of the pattern is on the 13th line from the left end of the card.
- * For endless card system, punch out the holes for more than 36 rows.

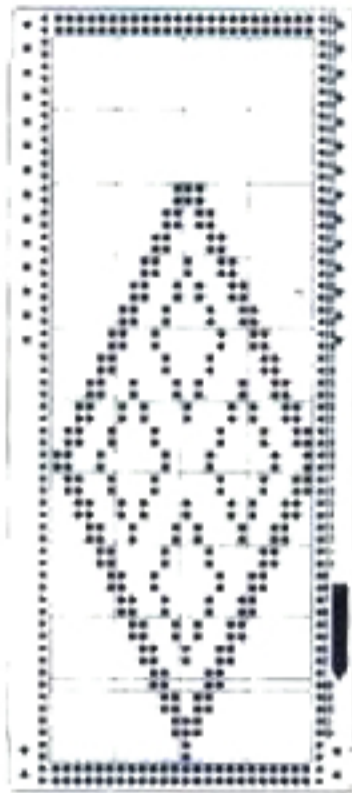
The following chart is the relation between the number of rows and repeating times.

Number of rows in one pattern	60	30	20	15	12	10	6	4	2
Repeating times	1	2	3	4	5	6	10	15	30

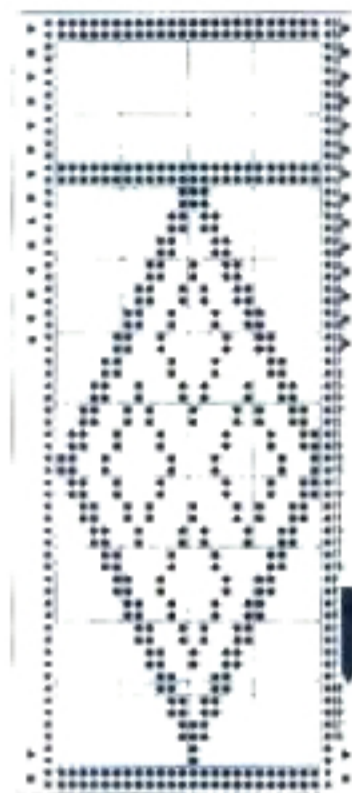
*In case of less than 60 rows in one pattern, cut off extra part of the card.

(But excluded above mentioned rows in one pattern.)

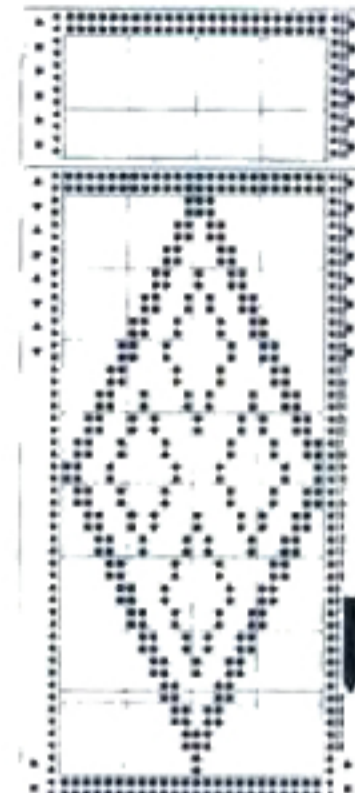
Example. 48 rows, 1 pattern



Punch out the holes for one pattern from the bottom of the card. (The last holes of the pattern will end at the step No. 41.)



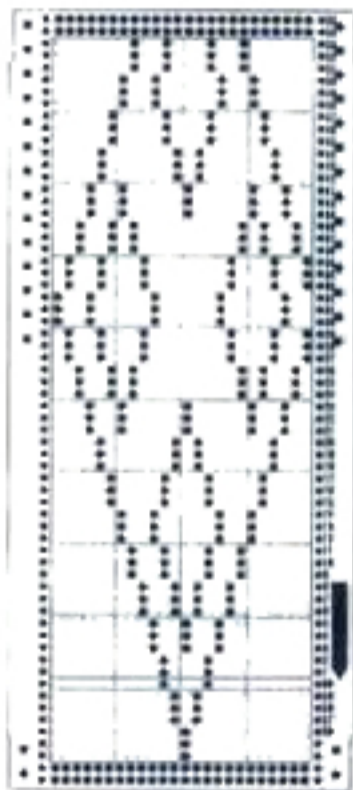
Punch out the holes for next two rows (at the step Nos. 42 and 43.)



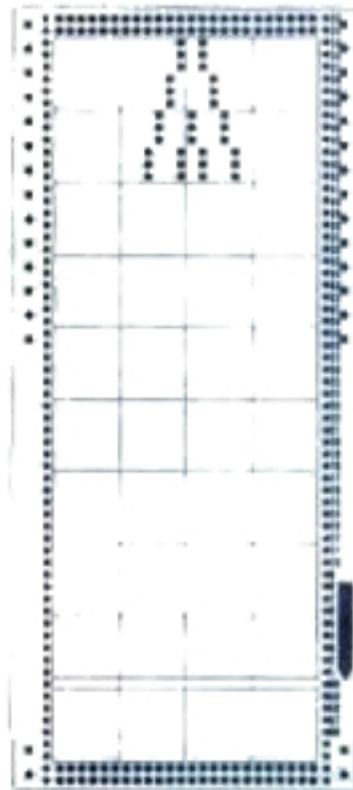
Cut off extra part of the card between the step No. 43 and 44. And cut off both corners for easy coupling.

*In case of more than 60 rows in one pattern, use two pieces of card and connect with plastic snaps.

Example. 72 rows, 1 pattern



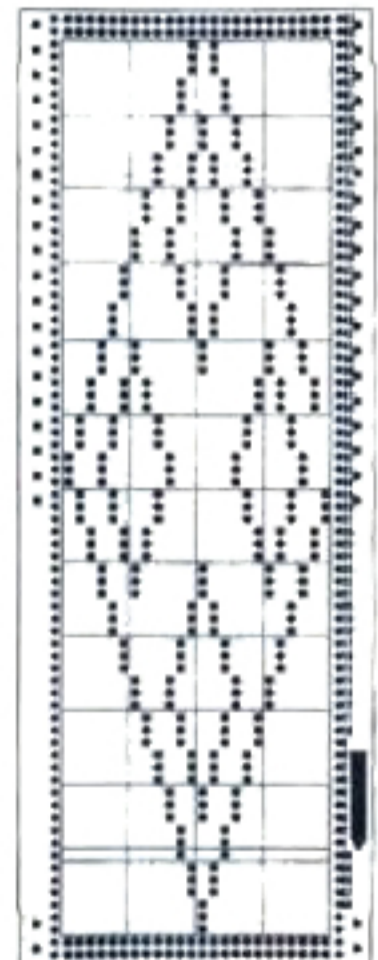
Punch out the holes up to 60 rows from the bottom of the card.



Take out the another blank card, and punch out the remaining part of pattern from the top of the card.



Punch out the holes for next two rows (at the step Nos.41 and 40.), and cut off extra part of the card between the step no. 40 and 39. And cut off both corners for easy coupling.



Connect both cards with plastic snaps to make the 72 rows pattern card.

Weaving pattern and the materials

Magic of knitting! Look at the pictures of the Weaving pattern. All of them were worked by weaving knitting using the same technique. As you see these pictures, by changing the Laying-in yarn quite different effects are obtained. Therefore following the examples included in this Knitting Pattern Book, more than hundred of different variations can be obtained by combining different types of yarn.

How to get the best effect in weaving knitting

1. We recommend using a finer yarn for basic knitting and a heavier yarn or a fancy yarn for weaving thread. This way you will get the effect of an interesting contrast and at the same time you can reduce the weight of the garment which you are making.
2. Pay special attention to the contrast of the colors of basic knitting and weaving thread. Always match them up by doing a sample piece.
3. It is necessary to set the number on the tension dial according to the weaving thread. Usually one graduation lower tension is used for weaving than for plain knitting. Do not set the tension too tight or the weaving thread may catch in the stitches formed.

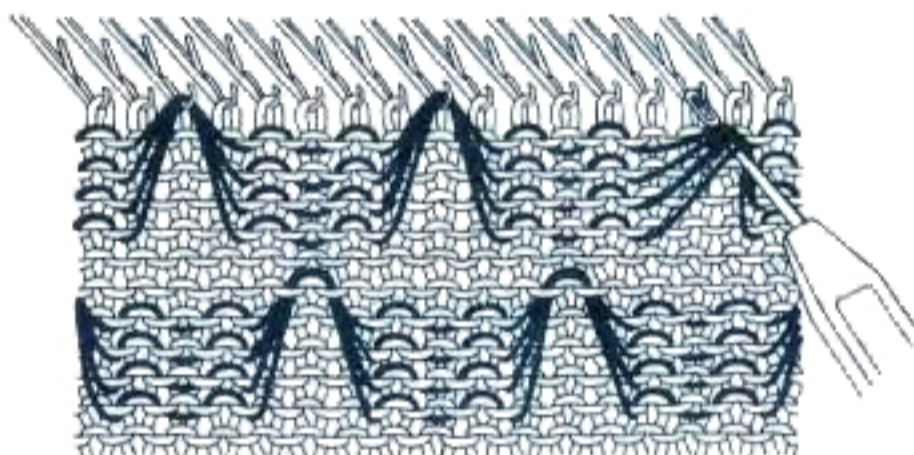
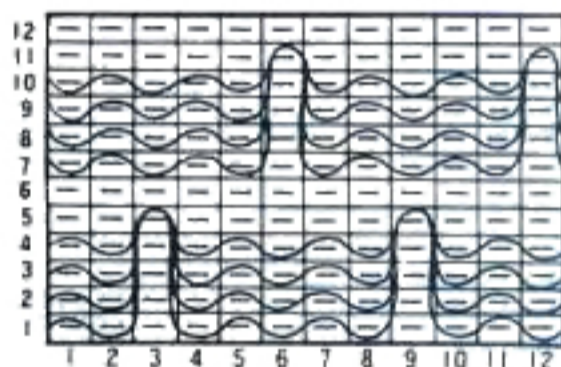
Special methods for making the Weaving patterns

There are three kind of methods for Weaving pattern knitting to get the fantastic pattern.

1. Pulling up the weaving thread.
2. Knitting by using the Latch tool.
3. Winding the weaving thread around the selected needles.

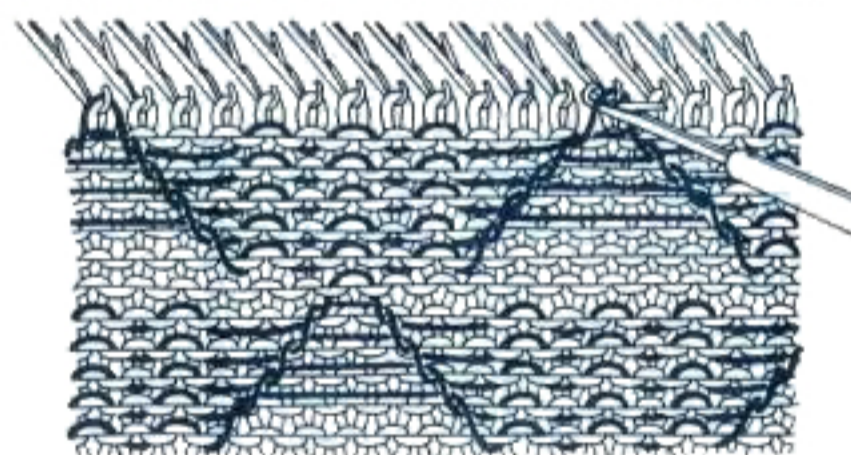
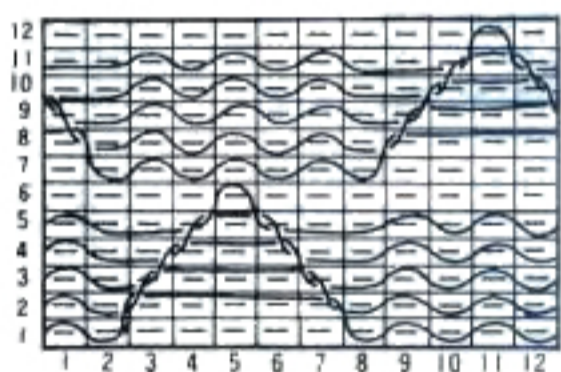
Knit a pattern by making reference to the Symbols of stitch.

(1) Pulling-up



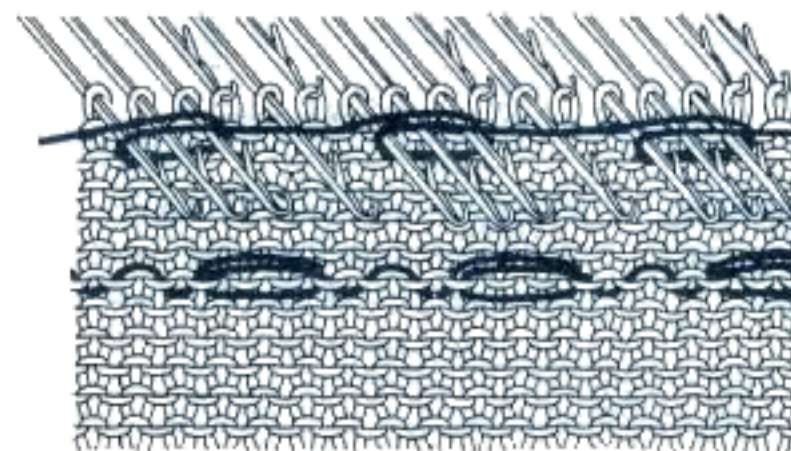
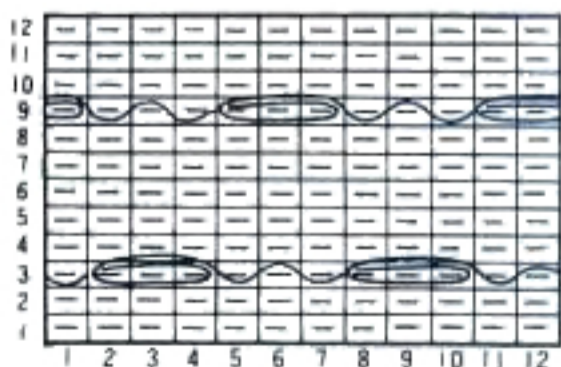
Pick up 4 weaving threads which are crossing in front of 3 knit stitches and put onto the needle on the 5th row.

(2) Knitting



Work knit stitch of 5 weaving threads crossing in front of 7 stitches and put the last stitch on to the hook on the 6th row.

(3) Winding



Bring forward the selected needles to position E, and wind the weaving thread around the stem of the needles.