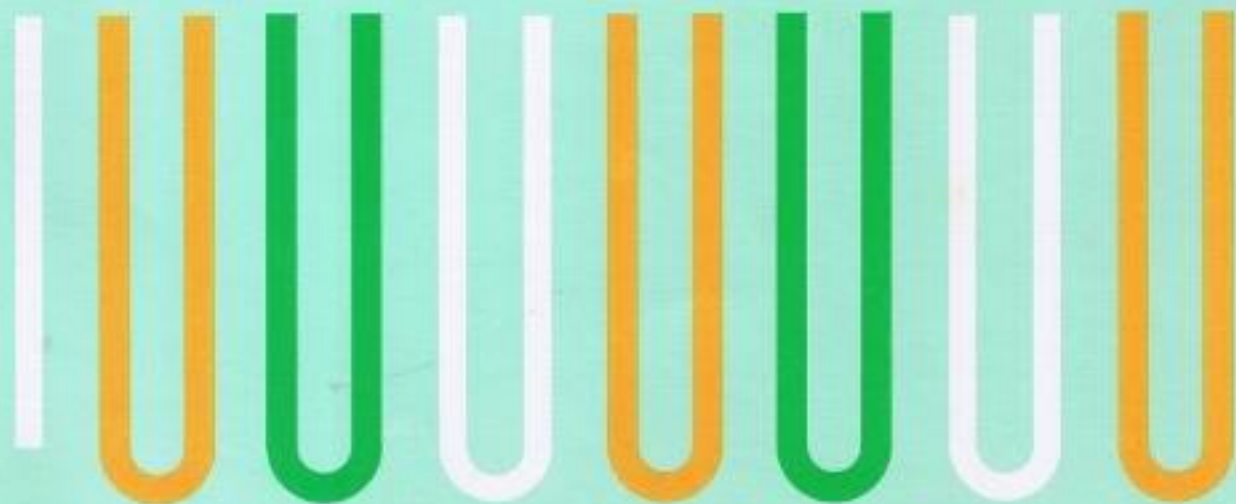


**Instruction manual
for Colour changer**

**Model
KRC-830**

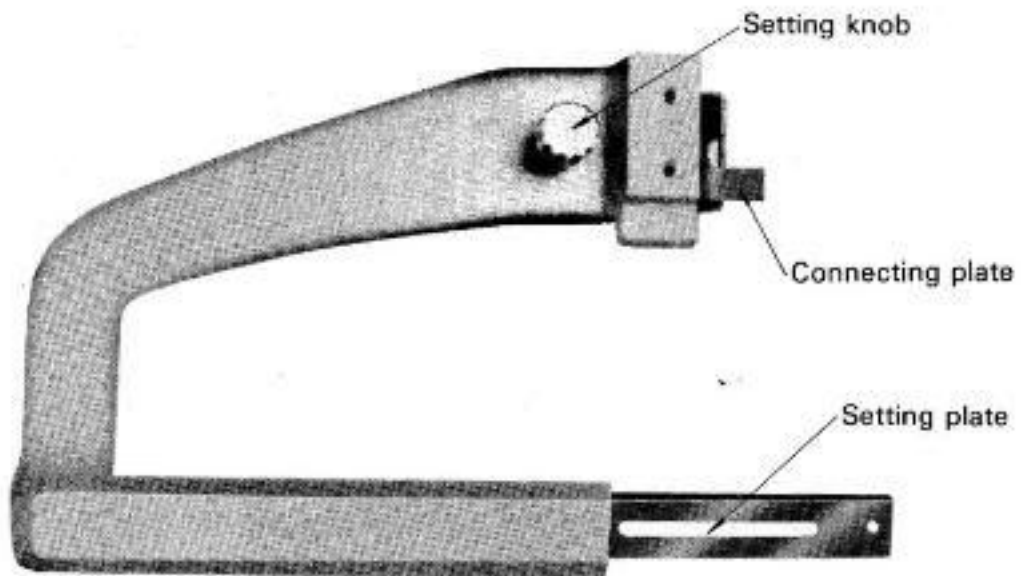


CONTENTS

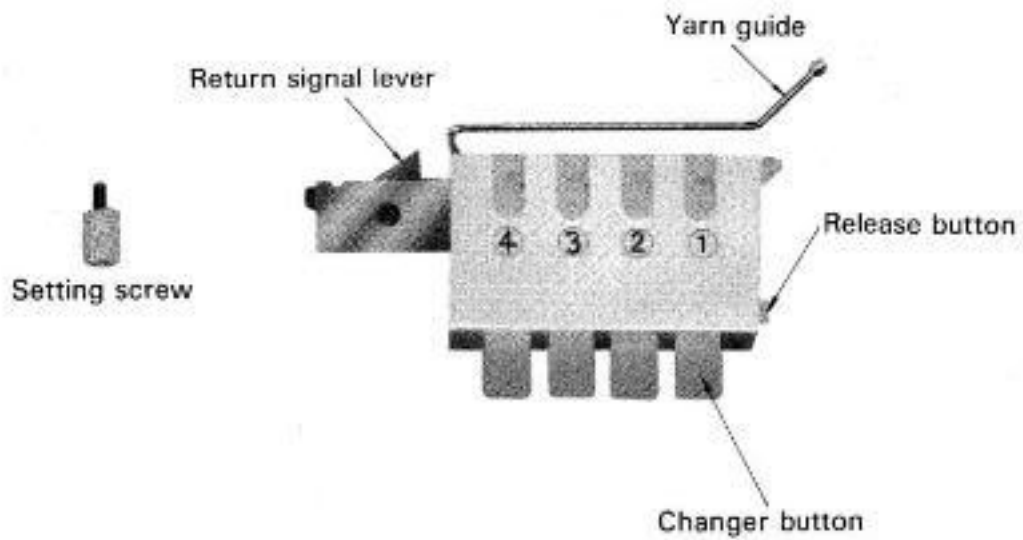
| | |
|---|----|
| Name of parts | 1 |
| How to set and how to take off | 3 |
| How to set | 3 |
| How to take off | 6 |
| How to knit stripes | 7 |
| How to knit multi-colour rib | 11 |
| Variety of multi-colour rib | 13 |
| One point pattern | 16 |
| How to knit one point pattern | 17 |
| Important points to remember | 18 |
| How to correct an error in pattern knitting | 18 |
| Partial knitting of Multi-colour rib | 19 |
| Others | 20 |
| Remark | 20 |
| How to produce a Punch card for Multi-colour Rib | 21 |

Name of parts

Setting arm



Colour changer



Branch tension stand



Setting stud

Rear yarn guide holder



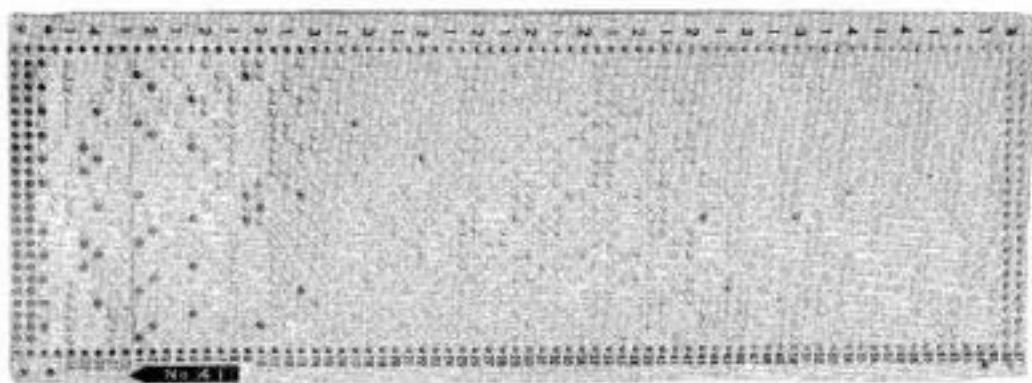
Yarn tension unit



Rear yarn guide



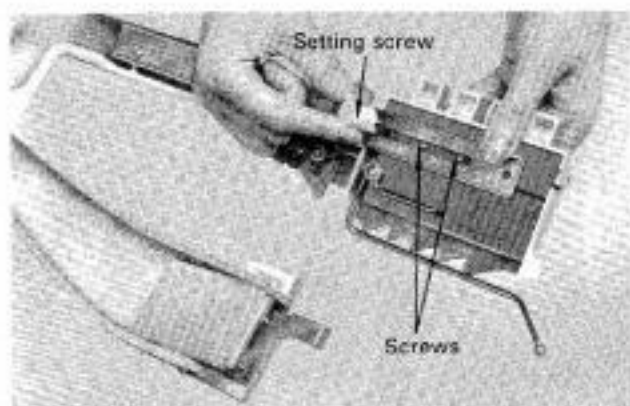
Punch card set (No. 41~50)



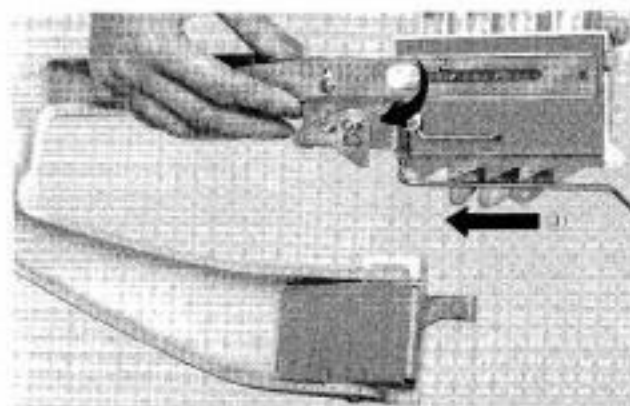
How to set and how to take off

How to set

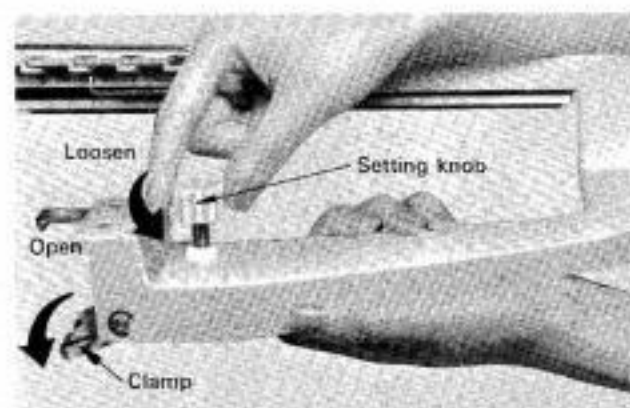
- * After setting up the ribbing attachment on the knitter, set up the colour changer.
- * The colour changer can be connected with the setting arm by one setting screw. Connect these as follows :



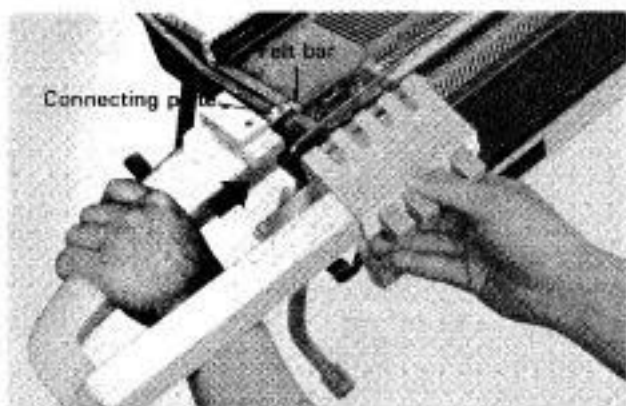
- (1) Putting the heads of two screws in the groove of the setting arm, fix the setting screw.



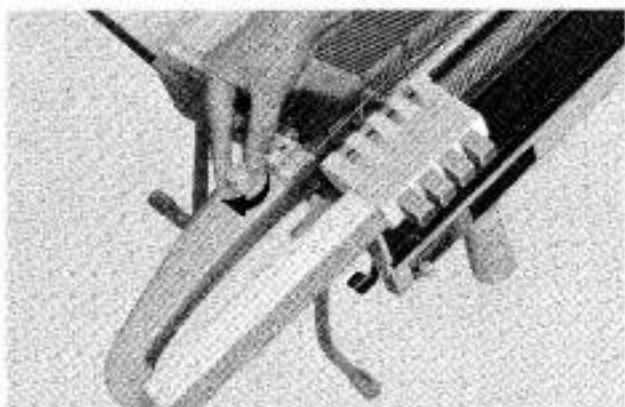
- (2) Slide the changer towards the setting arm as far as it goes, and then tighten the setting screw.



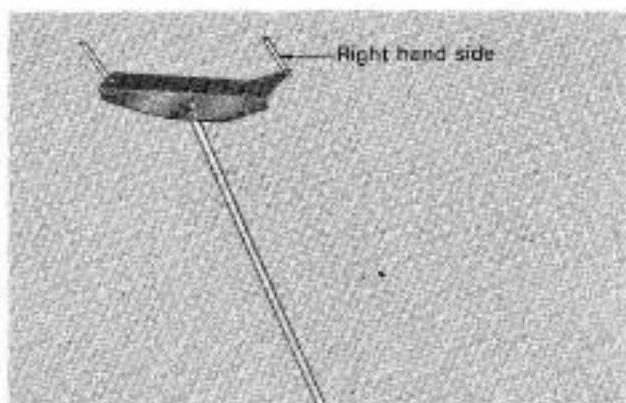
- (3) Loosen the setting knob as much as possible until the connecting clamp opens fully.



- (4) Push the projecting part of the connecting plate against the end of the felt bar and insert it as far as possible.



- (5) Pressing the setting arm to the knitter, fasten the setting knob.



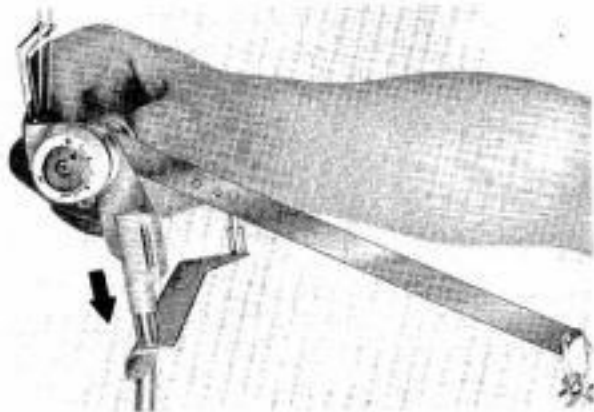
- (6) Insert the branch tension stand in the hole for the yarn tension rod.

- * Be careful with the front and back direction.
- * Yarn tension unit provided as an accessory for the knitter is not used.

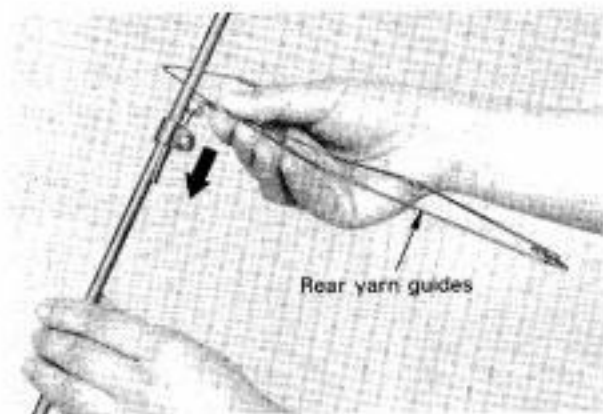


- (7) Open the front yarn guide in the direction of the arrow.

- (8) Turn the take-up spring until it clicks.

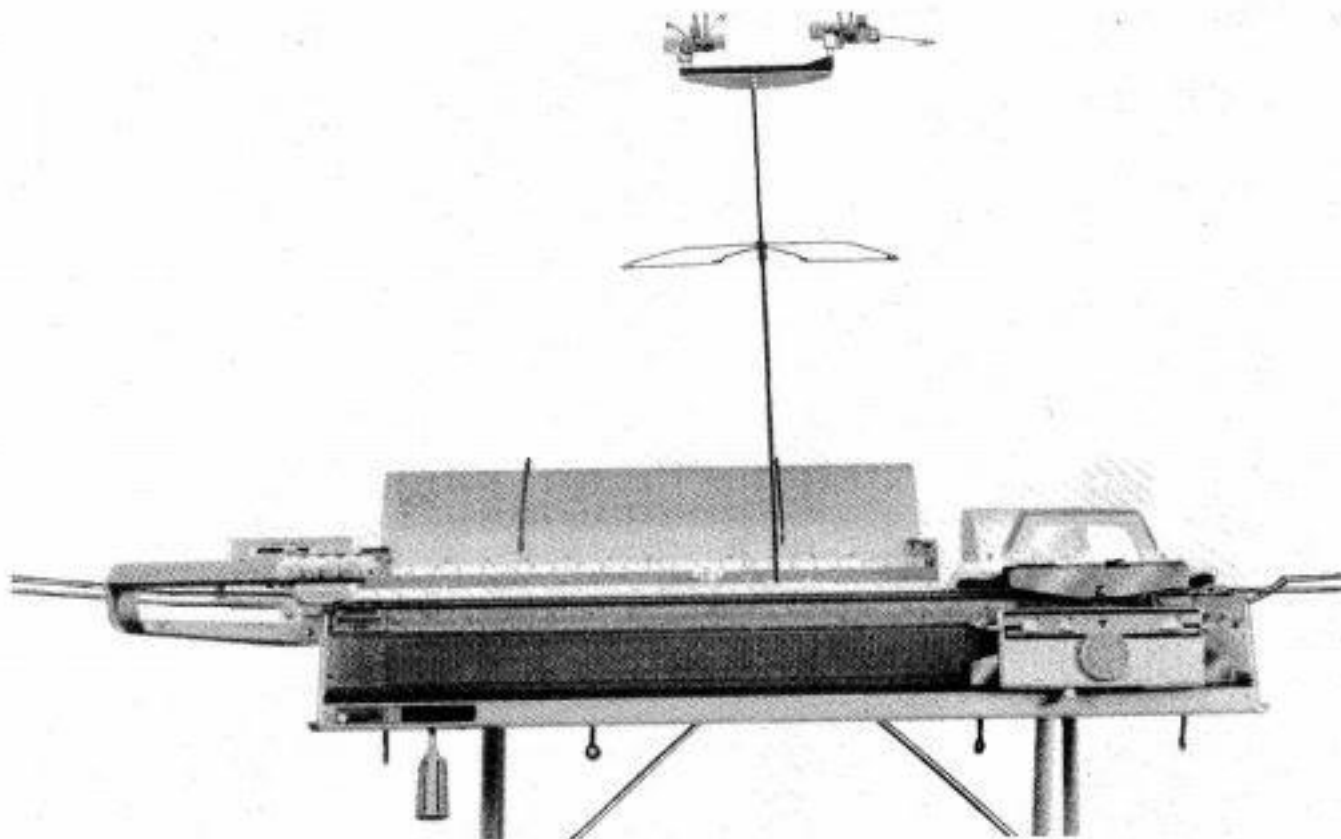


(9) Insert the yarn tension unit into the tension stand.



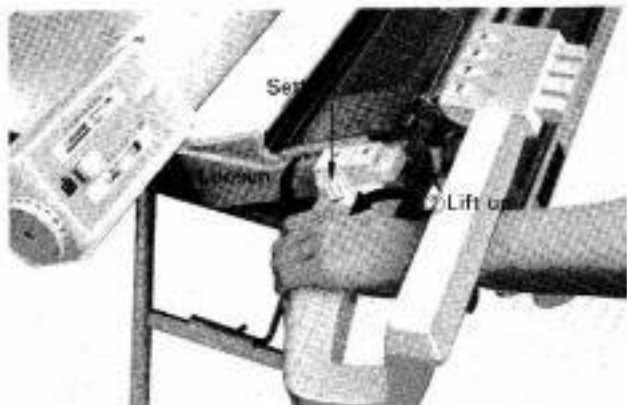
(10) Set the rear yarn guide on the tension stand.

(11) Set the extension rail on the left side of the knitter.

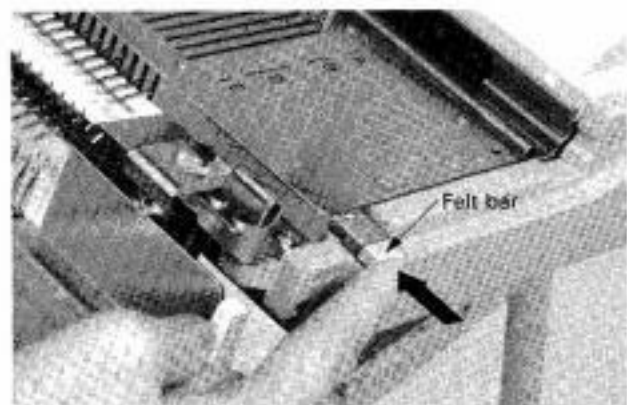


* The above shows the colour changer set up on the knitter.

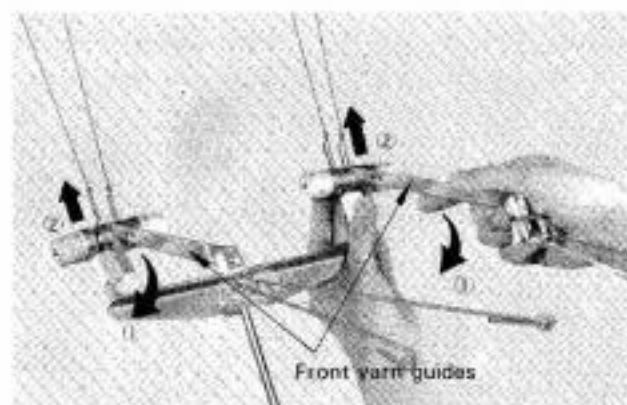
How to take off



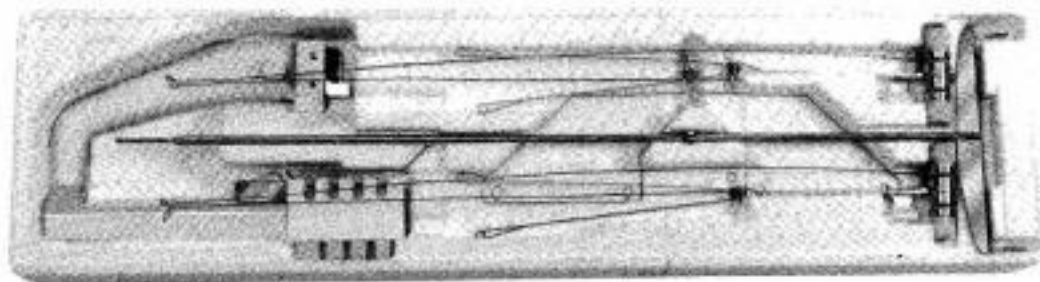
- (1) Loosen the setting knob of the setting arm. Lifting up the setting arm on the side of setting knob, pull out the setting arm.



- (2) After the setting arm is released, push back the felt bar which has been pushed out on the right side of the knitter.

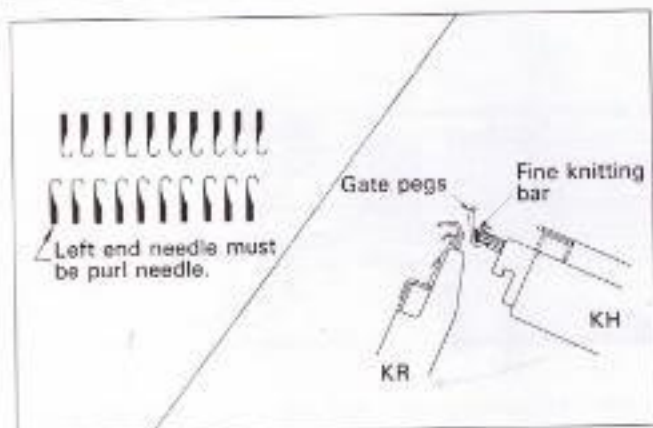
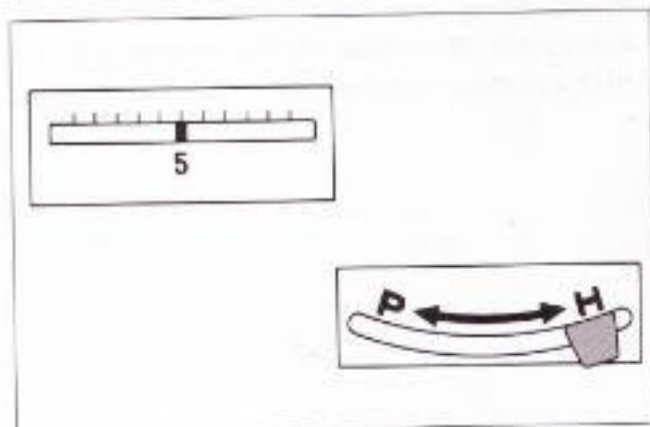
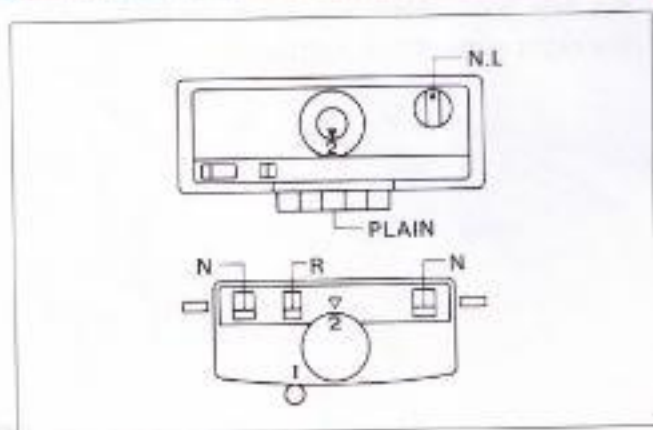


- (3) Press down the front yarn guide on the knitter and then take off the yarn tension so that you may shut the yarn tension with ease.



* Contain the colour changer set as shown above.

How to knit stripes



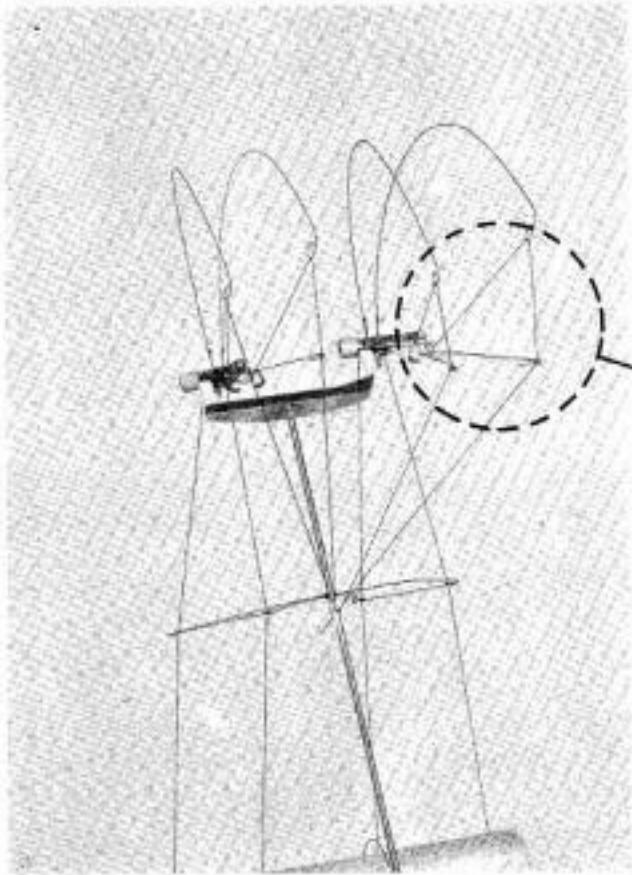
- * Let's try with a basic stripes first.
- * Please prepare four yarns (2 or 3 ply) of four different colours.

(1) Set the carriage.

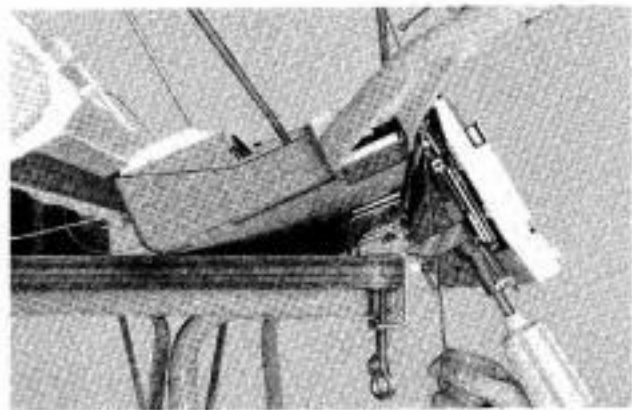
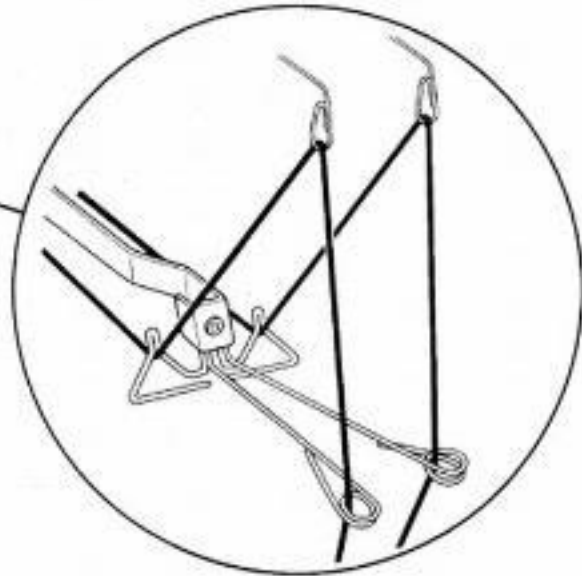
- * Set the K-carriage for the plain knitting.
- * Set the KR-carriage for the full needle rib knitting.
- * Set either of the tension dials at "2".

(2) Turn the racking handle to set the racking indicator at "5", and set the half pitch lever at "H".

(3) Insert the fine knitting bar behind the gate pegs of the knitter. So that it slips slightly underneath the needle bed. Aline the both of plain and purl needles on B-position in the width of the work you knit. (Bring forward purl needle so that the left end needle is purl needle and right end plain needle.) After operating the carriage two or three times, put the carriage on the right side.



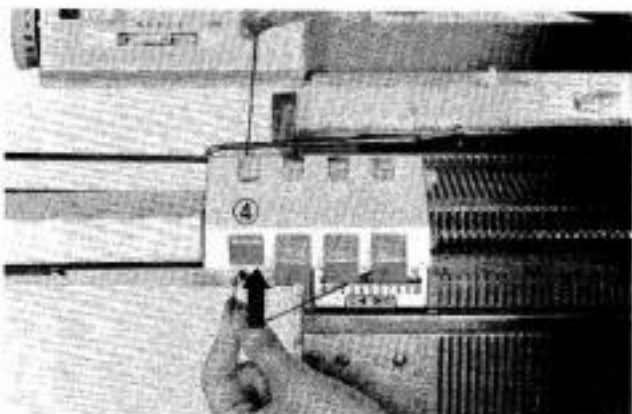
- (4) Thread the four yarns through the yarn tension unit, and then hook the ends of the yarns on the yarn clips.



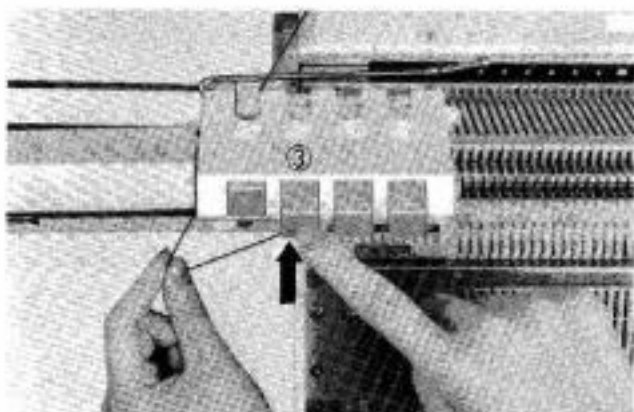
- (5) Remove the ends of yarns from yarn clips except right end yarn, and tie three yarns up. Pass it between the gate pegs.



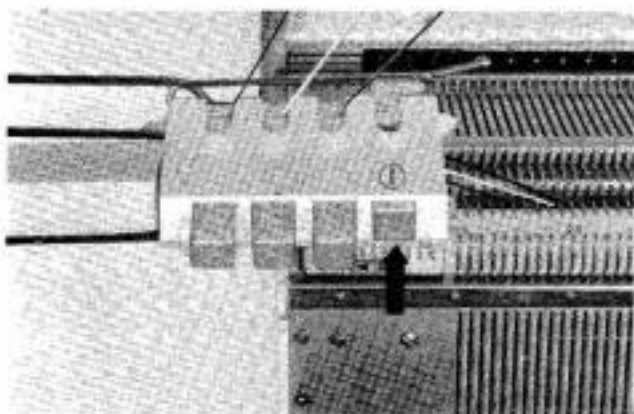
- (6) Hold the ends of the yarns on the yarn holder on the lower portion of the ribber.



- (7) Pushing the button ④ of the colour changer, thread the left end yarn through the hook on the top of the button.



- (8) If you push the button ③, the button ④ returns and the yarn is set in the button.

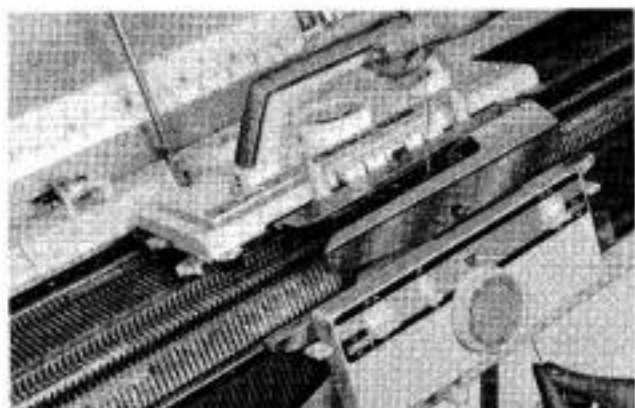


- (9) In the same way, thread the yarn in the buttons ③ and ②. Press the button ① and leave right end yarn free from the changer.

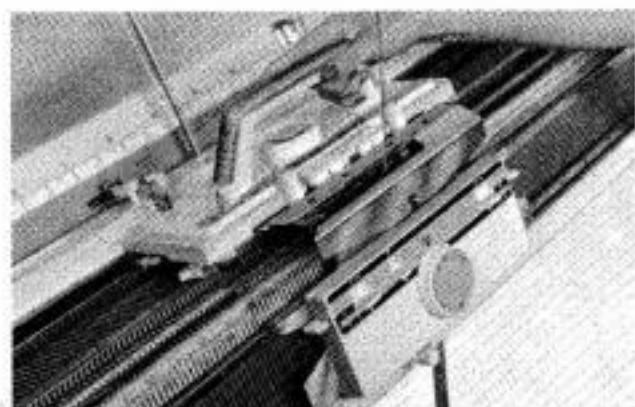


- (10) Thread the right end yarn into the yarn feeder.

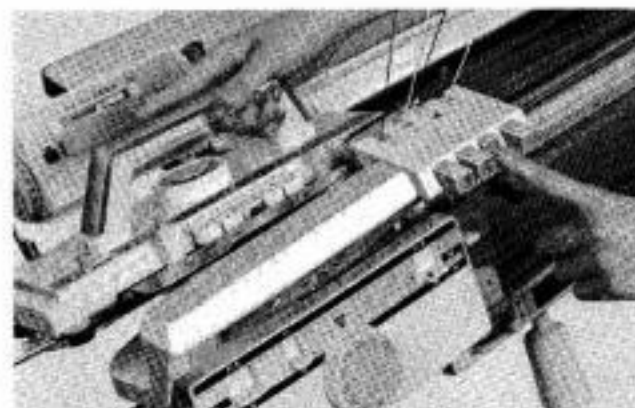
- * Make sure that the yarn is not pulled by the gate pegs or other parts.



- (11) Move the carriage to left to cast on the yarn. Hang the cast-on comb and then the weights.



- (12) You can make the full needle rib knitting with yarn ① (right end one) by moving the carriage.



- (13) To change the yarn, push the button for the yarn you want to knit after moving the carriage towards the colour changer until you hear the clink.

* If the yarn is slackened, pull it back on the rear yarn guide.

- (14) If the carriage is moved to right, the yarn is changed.

* It is likely that the change of the yarn is not done well depending on the quality of the yarn. In such case, pull up the yarn to be knitted by hand so that the yarn may go into the feeder.

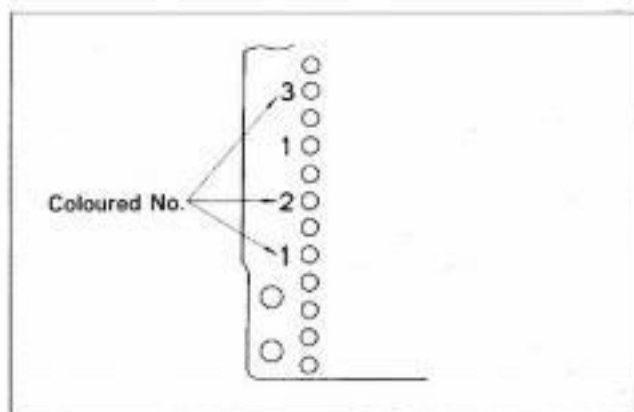
- (15) After all of the yarns are knitted in, remove the ends of the yarns from the yarn holder.

Repeat the steps (13)–(14) and you can produce the stripes with ease.

How to knit multi-colour rib

Yarn thickness and tension dial.
(for both knitter and ribber)

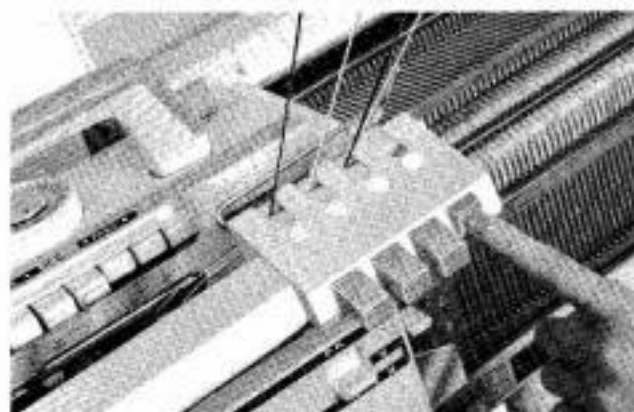
| KH / KR | 2-3 ply | 3-4 ply |
|-------------|---------|---------|
| KH810/KR830 | 1-2 | 3-4 |
| KH820/KR830 | | |
| KH830/KR830 | 2-3 | 4-5 |



- * Medium thickness yarn is suitable for this knitting.
- * Bring forward the needle for full needle rib knitting.
- * Slide lever of the ribber carriage is set at "1"
- * Use the fine knitting bar.

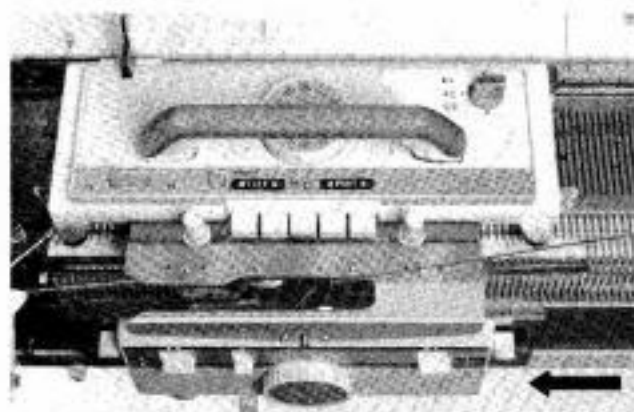
(1) By reading the coloured No. on the left side of the punch card, set the necessary numbers of the yarns on the yarn tension and the colour changer.

- * Set the main yarn in the button ① (right end one) and set contrast colour yarns into the buttons ② and ③ in the order you want to knit.

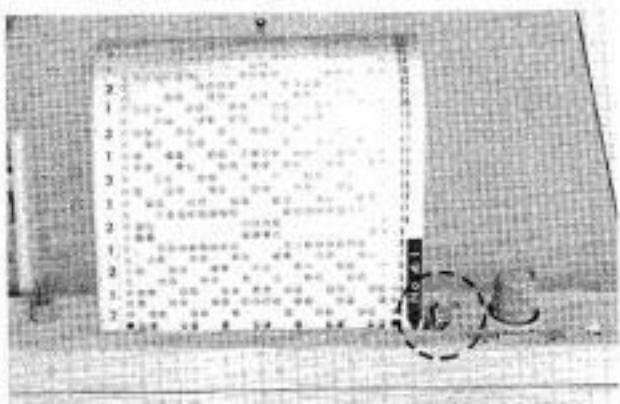


(2) Thread the main yarn into the yarn feeder of the carriage and then operate to cast on.

- * Bring forward the needles so that the left end is purl needle.
- * The way of first row knitting is the same as for knitting stripes.

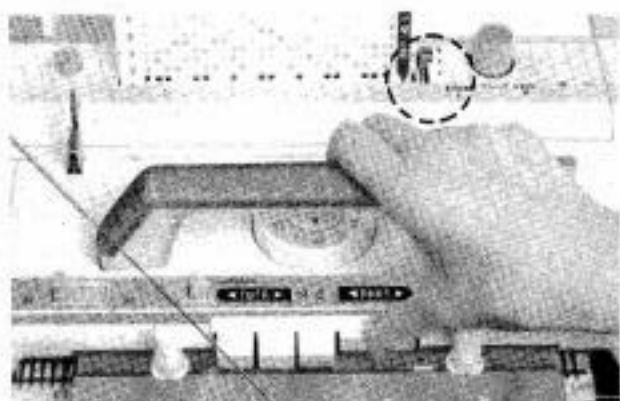


(3) After knitting the correct number of the rows for the welt, finish with the carriage on the left side.

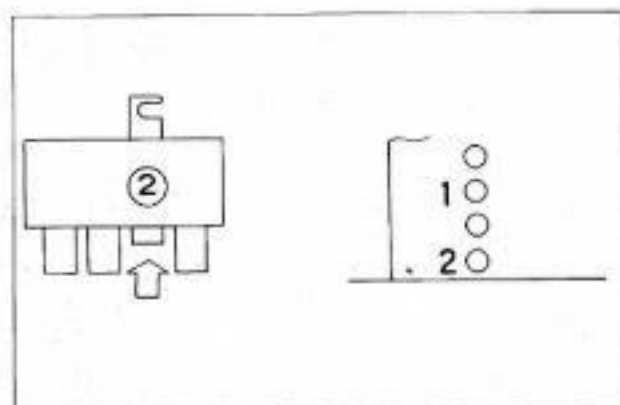


(4) Set the card for the start and then set the card lock lever at "●"

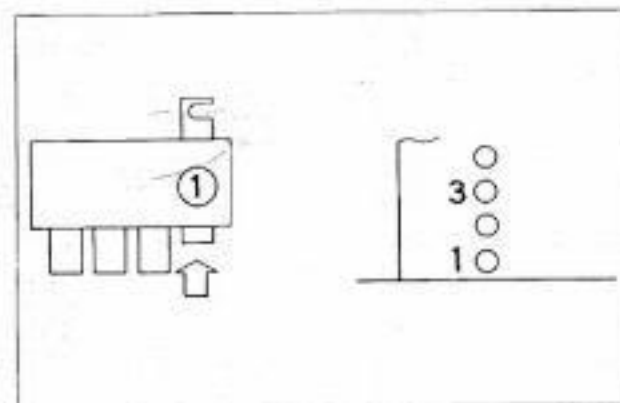
(5) Set the change knob for "KC", and then move the carriage to right by one row. Thus, the knitting needles are selected.



(6) Set the card lock lever at "▼" and then push both cam buttons for PART at the same time.



(7) Move the carriage towards the colour changer until you hear the clink and then push the button which is instructed by the number shown on the left side of the punch card so as to change the yarn.



(8) Move the carriage from left to right and back again, and then push the next button indicated on the card.

Repeat the step (8) to knit the multi-colour rib.

* The stripes is knitted instead of the pattern when the card is slipped by one step or both of the PART buttons are not pushed. Please carefully check in this point.

Variety of multi-colour rib knitting

* Number of row for the pattern is that on the plain side.

* KH : Knitter KR : Ribber



Card No.41

24 sts. × 36 rows for one pattern

Tension dial... KH(2) KR(2)

Yarn... 2-3 ply

- ① colour... white
- ② colour... green
- ③ colour... grass green
- ④ colour... red



Card No.42

12 sts. × 12 rows for one pattern

Tension dial... KH(2) KR(2)

Yarn... 2-3 ply

- ① colour... beige
- ② colour... black
- ③ colour... green
- ④ colour... red



Card No.43

24 sts. × 32 rows for one pattern

Tension dial... KH(2) KR(2)

Yarn... 2-3 ply

- ① colour... green
- ② colour... grass green
- ③ colour... red
- ④ colour... beige

* 28 rows are knitted for multi-colour pattern and 4 rows for rid, making a total of 32 rows.



Card No.44

8 sts. \times 12 rows for one pattern

Tension dial. . . KH(2) KR(2)

Yarn. . . 2-3 ply

- ① colour. . . sky blue
- ② colour. . . grass green
- ③ colour. . . yellow
- ④ colour. . . white

* Contrast colour yarn is changed for each pattern in the direction of the row until three pattern. The number of the row for the colour pattern is 36 (12 \times 3).



Card No.45

8 sts. \times 12 rows for one pattern

Tension dial. . . KH(2) KR(2)

Yarn. . . 2-3 ply

- ① colour. . . white
- ② colour. . . black
- ③ colour. . . brown
- ④ colour. . . beige

* 10 rows are knitted for multi-colour pattern, and 2 rows for rib knitting and one pattern is completed with 12 rows. As the yarn is changed for each pattern in the direction of the row until two patterns, the number of the row is 24 (12 \times 2).



Card No.46

24 sts. \times 24 rows for one pattern

Tension dial. . . KH(2) KR(2)

Yarn. . . 2-3 ply

- ① colour. . . white
- ② colour. . . red
- ③ colour. . . dark green
- ④ colour. . . orange



Card No.47

24 sts. × 24 rows for one pattern

Tension dial. . . KH(2) KR(2)

Yarn. . . 2-3 ply

- ① colour. . . dark blue
- ② colour. . . yellow
- ③ colour. . . red
- ④ colour. . . orange



Card No.48

12 sts. × 12 rows for one pattern

Tension dial. . . KH(2) KR(2)

Yarn. . . 2-3 ply

- ① colour. . . white
- ② colour. . . gray
- ③ colour. . . dark blue
- ④ colour. . . red

*The main yarn is changed from ① to ②, and from ② to ① on the way of the pattern every six rows.



Card No.49

24 sts. × 24 rows for one pattern

Tension dial. . . KH(2) KR(2)

Yarn. . . 2-3 ply

- ① colour. . . orange
- ② colour. . . white
- ③ colour. . . dark blue
- ④ colour. . . yellow

*This pattern is produced by changing the second colour yarn to the third one after the card turns round, and to the fourth yarn after another turn of the card. So 72 rows are knitted for the colour pattern.



Card No.50

24 sts. × 36 rows for one pattern

Tension dial... KH(2) KR(2)

Yarn... 2-3 ply

- ① colour... dark blue
- ② colour... orange
- ③ colour... white
- ④ colour... black

* The main yarn is changed from ① to ③ on the way of the pattern. For the picture pattern, make the rib knitting for the sea (dark blue) and the sky (white) before and after the pattern depending on your taste.

One point pattern



Card No.50

24 sts. × 36 rows for one pattern

Tension dial... KH(2) KR(2)

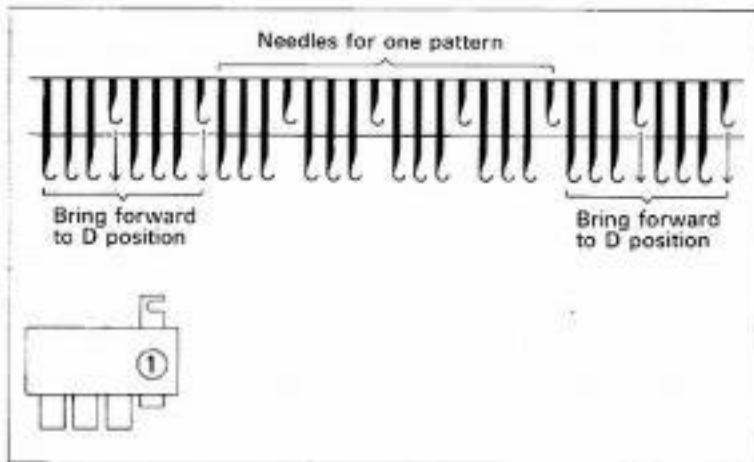
Yarn... 2-3 ply

- ① colour... dark blue
- ② colour... orange
- ③ colour... white
- ④ colour... black

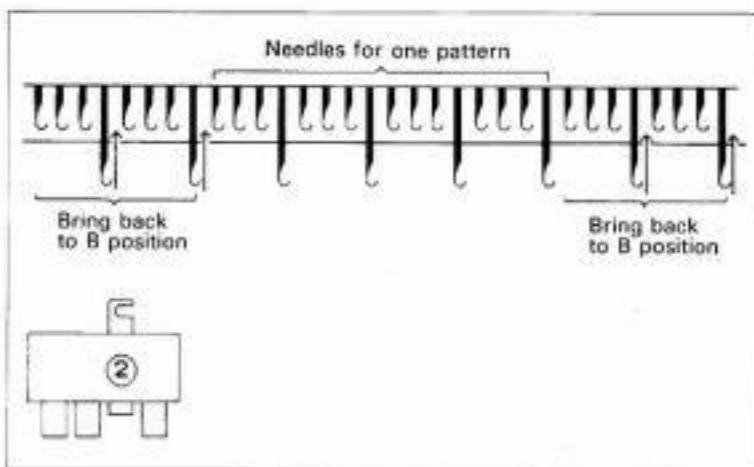
* Refer to "How to knit the one point pattern" on next page.

How to knit one point pattern

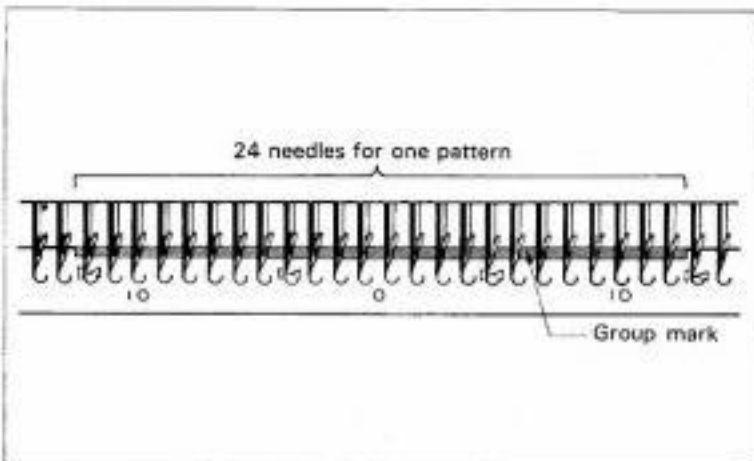
The ways of casting-on and changing the yarn is the same as for knitting multi-colour rib but the knitting needles arrangements for eliminating unnecessary pattern on the knitter is different.



- (1) When the button for the main yarn is pushed (the button No. ① when the main yarn is only one), bring forward the knitting needles for unnecessary pattern from B-position to D-position out of the needles selected for the pattern. And then move the carriage.



- (2) When the button for the contrasting yarn (other buttons except button No. ①) is pushed, bring back the needles for unnecessary pattern from D-position to B-position and then move the carriage.

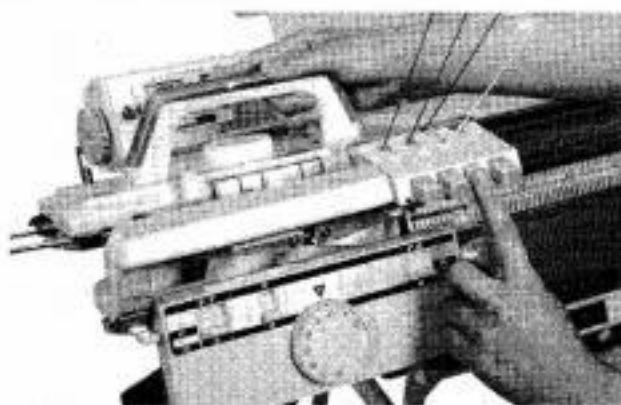


- * As the same one yarn is knitted from one side to another and back again, this operation is required for every row.
- * It is easy to see which needles should be brought forward or back if you use the needle selection mark on the front plate of knitter needle bed for the partition.

Important points to remember

How to correct an error in the pattern knitting

- (1) Set the card lock lever at "●".
- (2) Remove both of the knitter and ribber carriages and put them on the right side of the work.
(For how to take off and set, please refer to the instruction manual of the ribber.)
- (3) Unravel the incorrect row. Putting the ends of all yarns on the left side, thread each of the yarns into respective buttons of the colour changer.
- (4) After unravelling, align the knitting needles for both of the knitter and the ribber on B-position.
- (5) Rewind the punch card as many rows as you unravelled.
- (6) Leave the knitter carriage as is. (Cam button : PART L, R Change knob : KC) Set the cam buttons R, L on the ribber carriage for P. R. (Leave the Tucking lever for R.)
- (7) Move the carriage from right to left. (The yarn is free from the yarn feeder this time.) (The plain needles are selected.)
- (8) Set the cam levers R, L on the ribber carriage at N.



- (9) Move the carriage until the yarn changing position and then push the button for the coloured No. indicated on the punch card.
- (10) Set the card lock lever at "▼".

* If you find an error in pushing the button of the colour changer before the carriage is not on the work, set the change knob on the knitter carriage for N. L and then return the carriage to the yarn changing position.

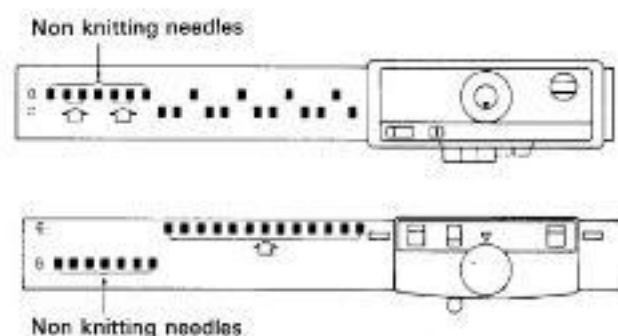
* If you find an error in pushing the button of the colour changer before you move the carriage, just push the correct button.

Partial knitting of Multi-colour rib.

Explanation is made on the left side partial knitting.

(1) Put the carriage on the right side after you continued knitting.

(2) Set cam lever R. L of the ribber carriage for P. R.
(Tucking lever is set at R and holding cam lever R. L is at N.)

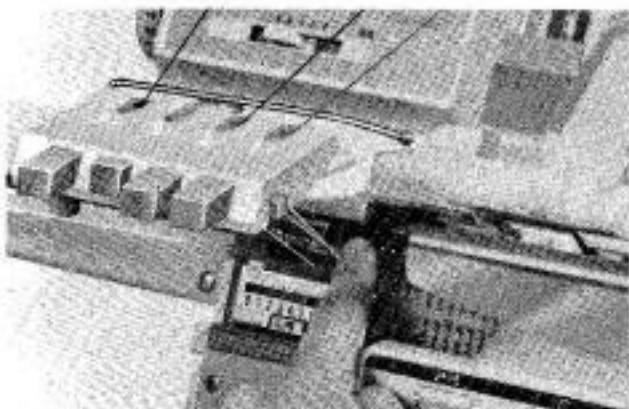


(3) Bring the knitting needles selected at non-knitting position back to B-position and bring forward the purl needles for the knitting to E-position.

(4) Move the carriage to left and then change the yarn.

(5) Bring the knitting needles selected at non-knitting position back to B-position and bring forward the purl needles for knitting to E-position.

(6) Holding the non-knitting yarn from the colour changer so as to pass it through the gate pegs by hand (hereafter this operation is repeated.) and then move the carriage to right. Now you completed first row with partial knitting. From now on, with increasing or decreasing the non-knitting needles, repeat steps (3) to (6).



The right side partial knitting is done in the same way as for left side one. But there is no need to hold the non-knitting yarns between the gate pegs.

Others

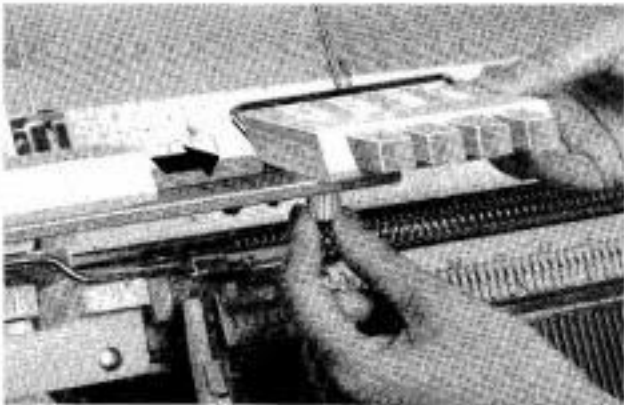


- * You can silence the sound of return signal lever.

You can silence the clink showing the changing position of the yarn, if necessary.

Turn lever stops if you push toward you and slide it to left.

Turn lever clicks again if you push the end of the lever on left side.



- * Colour changer can be slided horizontally

If the knitting width is within 80 stiches on the left side, you can lessen the operation of the carriage by sliding the changer towards right.

Loosen the screw on the lower part of the colour changer and move it toward right as far as it goes and then fasten the screw.

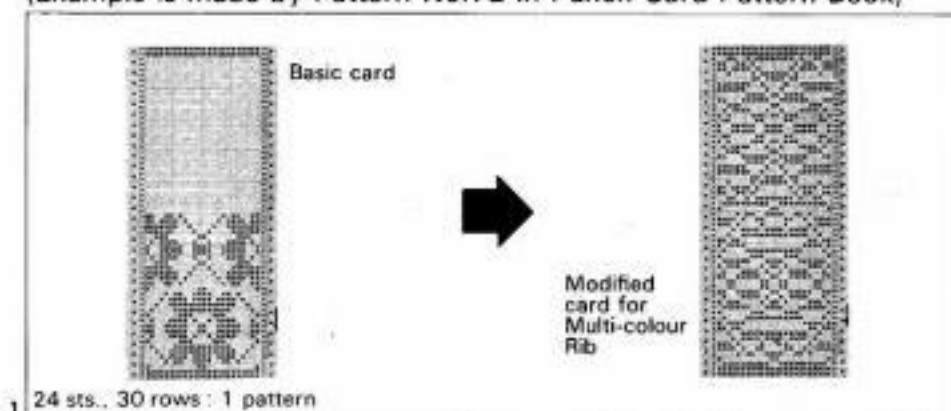
Remark

Remove the changer arm when using the sinker plate of the knitter. As the arm touches the sinker plate. (Please refer to page 6 for how to remove the colour changer.)

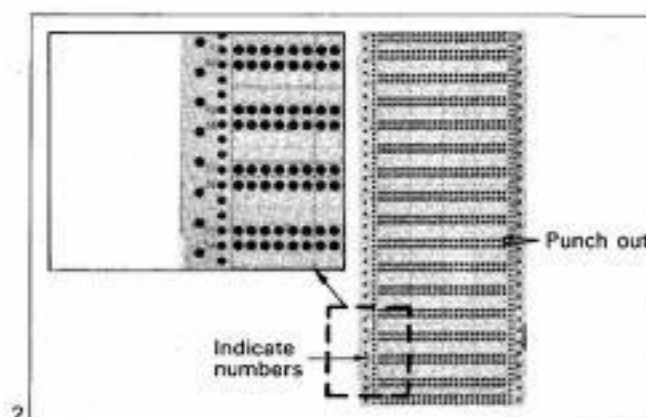
How to produce a Punch card for Multi-colour Rib

- * One row of Multi-colour Rib is performed by knitting each yarn separately. Therefore, it is not possible to use the normal type of pre-punched card or the patterns direct from the pattern book. It is necessary to change the format of the punched holes by using the following method:—

(Example is made by Pattern No.72 in Punch Card Pattern Book)



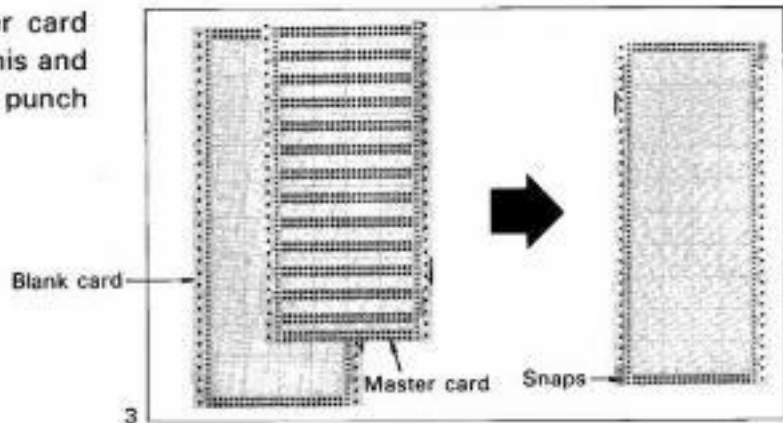
- (1) First of all prepare a Master Card as per the photograph on the right. This is used to prepare punch cards for multi-colour rib. You will see that working from the bottom of the card, upwards, **one** row is left blank then two rows are punched out, then two rows are left blank, then two rows punched out and so on. Again working upwards, number **each row you have punched out on the left hand side of the card starting with the number 54** then 55, 56, 57, 58, 59, 60, 1, 2, 3 etc. up to 23.



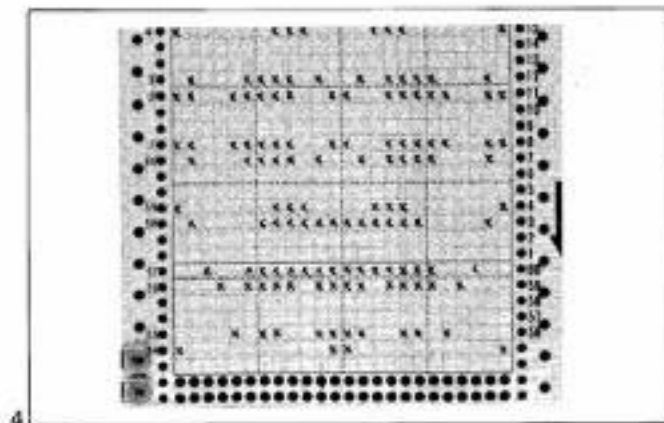
- * Blank card and Puncher are available separately.

- (2) Select a pattern which you wish to knit from the pattern book. For example Pattern No.72 as shown above. You will see that the pattern is shown only up to row 23. This is because the amount of rows up to this point represent one repeat of the design. (It is **important** to remember that although the pattern is shown up to row 23, it actually shows 30 rows, this is because there are **7 rows below line No.1**) The number of rows necessary to cover a pattern repeat is shown by the second figure under each pattern diagram in the pattern book.

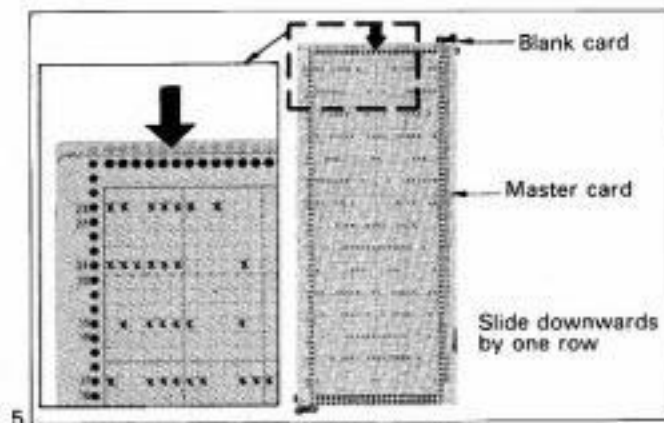
- (3) Take a blank card and put the master card which you have produced on top of this and fasten them together with your plastic punch card snaps.



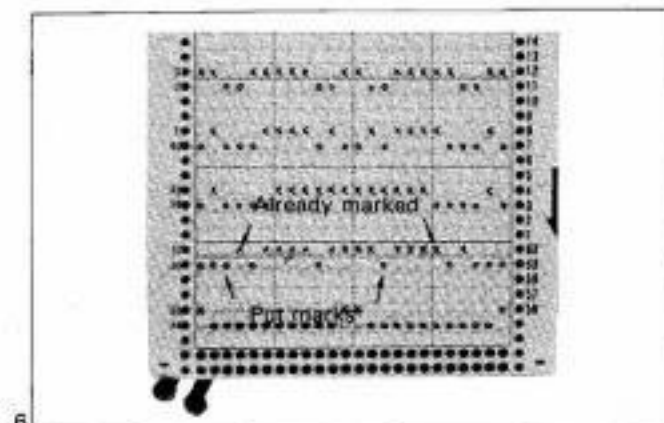
- (4) You are now ready to copy your pattern. This is done by marking the holes to be punched, through the punched holes on the Master Card, onto the blank card underneath. The numbers which you have marked on the left side of your Master Card are the rows to be copied from the pattern diagram in the Pattern Book, remembering that rows 54 and 55 on your Master Card are the first two rows on the pattern diagram. (These have no numbers against them on the diagram). Row 56 and 57 on your Master Card are rows 56 and 57 on the diagram and so on until the Master Card is completed.



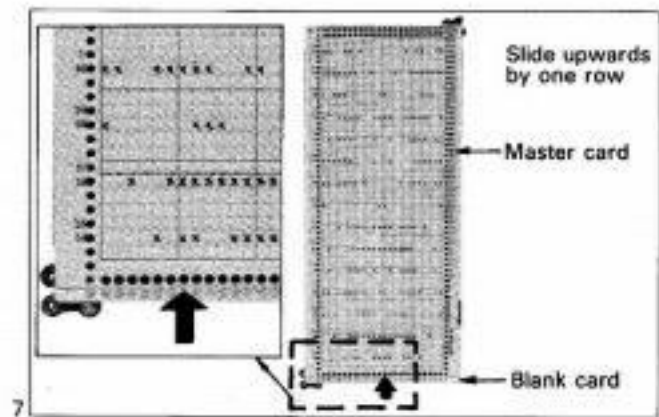
- (5) When the master card is completely marked, unfasten the snaps and move the Master Card down by one row. Fasten the cards together again.



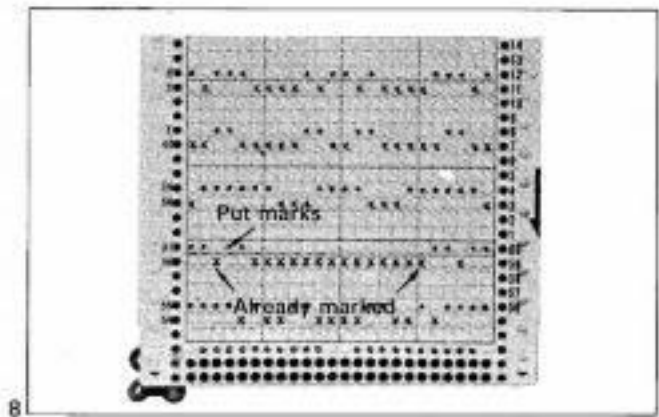
- (6) Now you will see that the marks you have made on the blank card only show through the top row of each set on the Master Card. So mark through each lower row opposite any hole on the top row which is not marked.



- (7) Again after completing the card, unfasten the snaps and slide the Master Card **up** by **two** rows. (This has taken the Master Card back to its original position, and then up by one row).



- (8) Now you will see that the marks you have made on the blank card only show through the **bottom** row of each set on the Master Card. So mark through each upper row **opposite** any hole on the lower row which is **not marked**.



- (9) After completing the card remove the snaps and take away the Master Card. The blank card underneath is now ready to be punched out.

