



Instruction Manual

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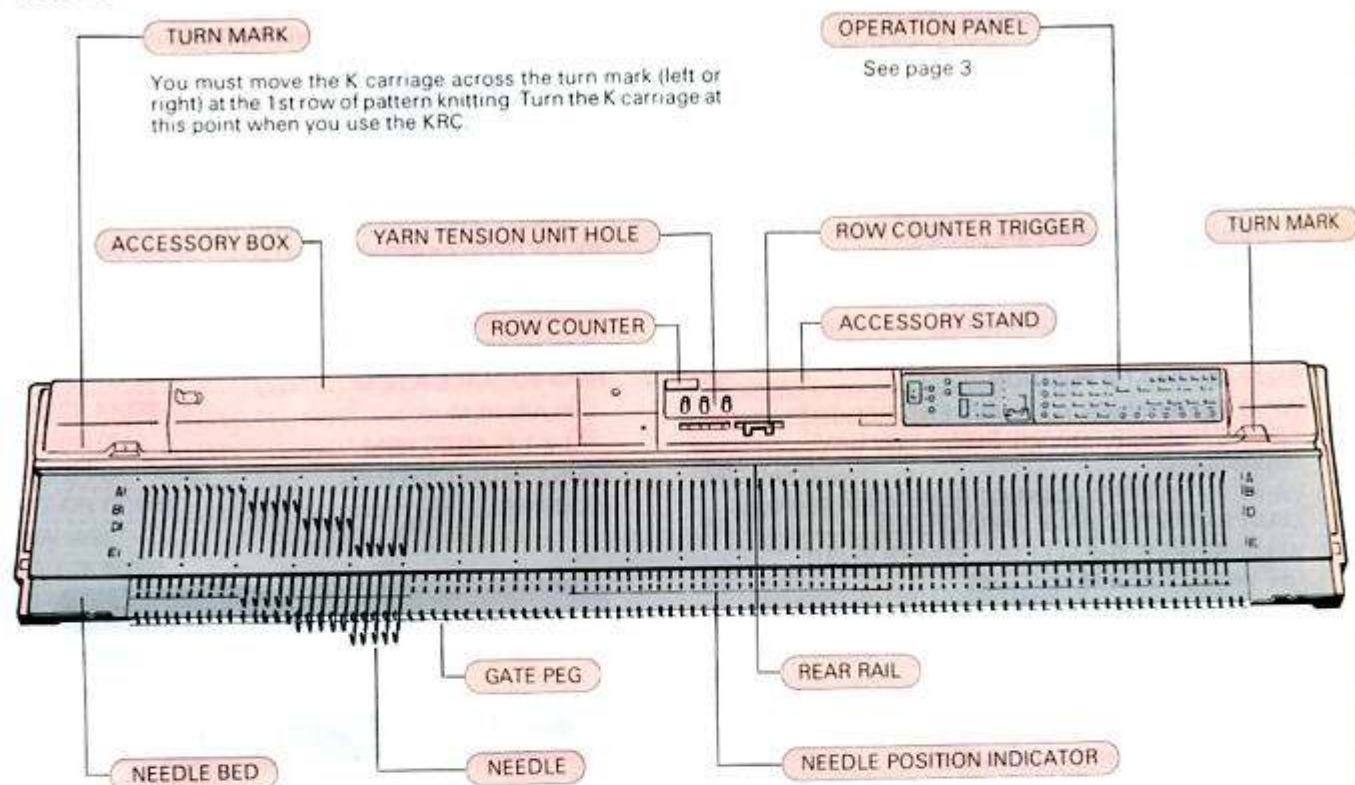
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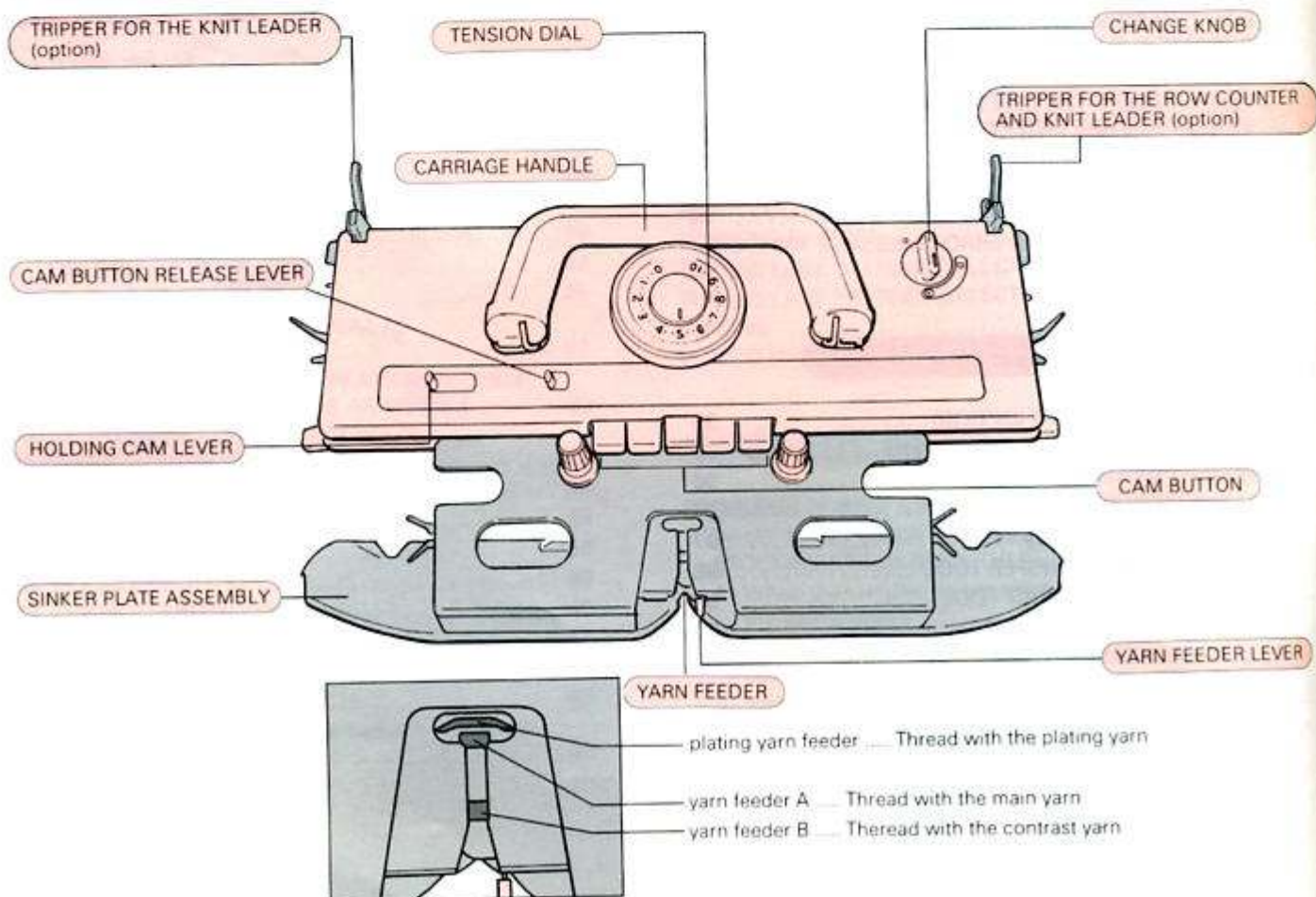
HOW TO USE YOUR KNITTING MACHINE

PART NAMES

● MACHINE



● K CARRIAGE



● ACCESSORY

PATTERN BOOK



DESIGN SHEET

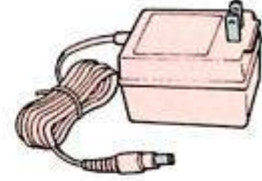


WHEEL BRUSH



AC ADAPTOR

Always use the adaptor for exclusive use of this machine.



YARN TENSION UNIT

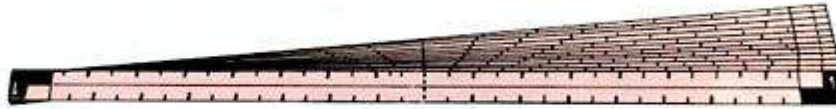


CAST-ON COMB



STITCH MEASURE SCALE

Used with the knit leader (option)



CROCHET HOOK



TAPESTRY NEEDLE



CLAW WEIGHT (6 pcs)



LATCHET TOOL



SPARE NEEDLE



TRANSFER TOOL



CAST-ON THREAD



HAND BRUSH



TABLE CLAMP



OIL



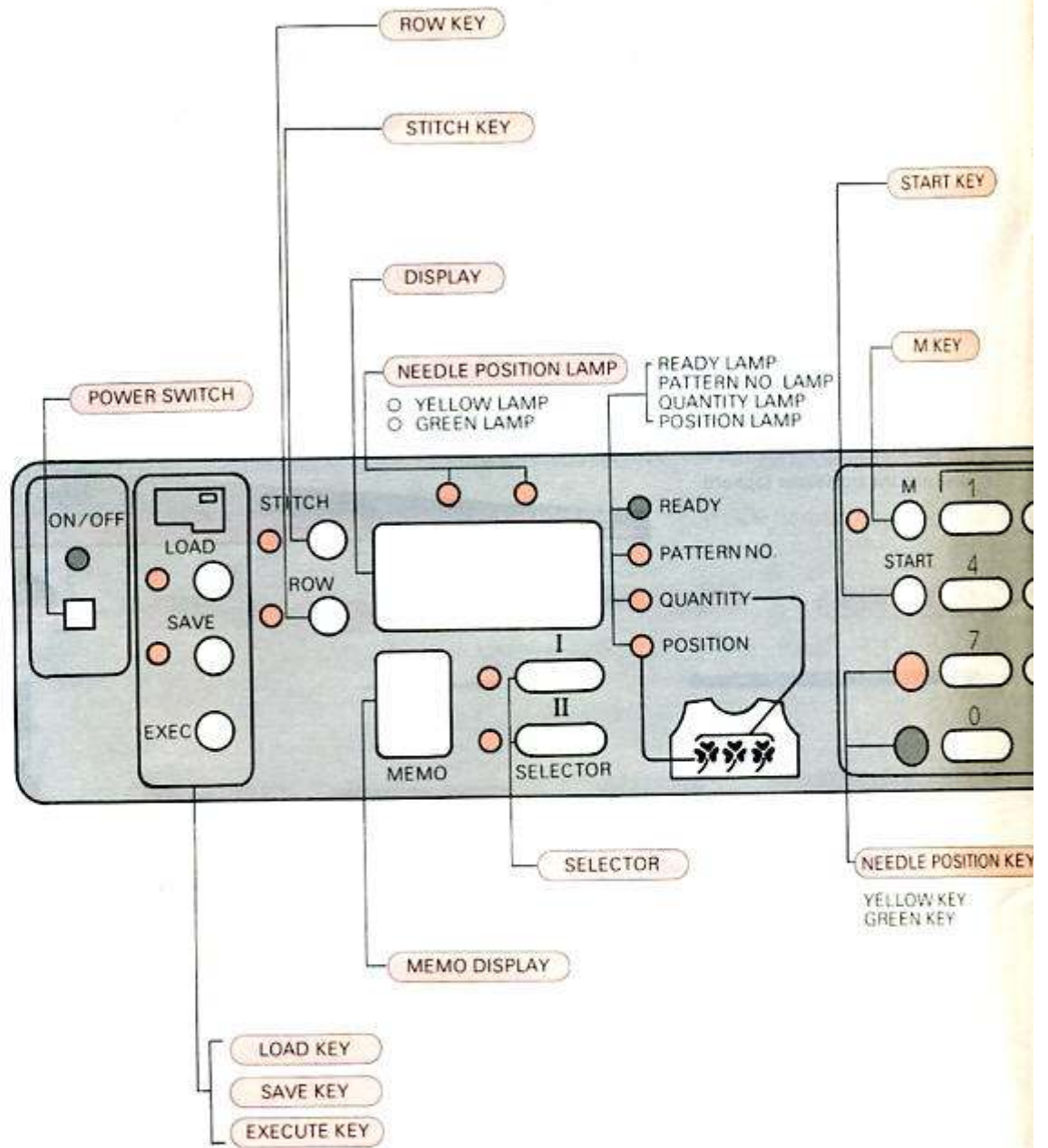
CARRIAGE LOCK



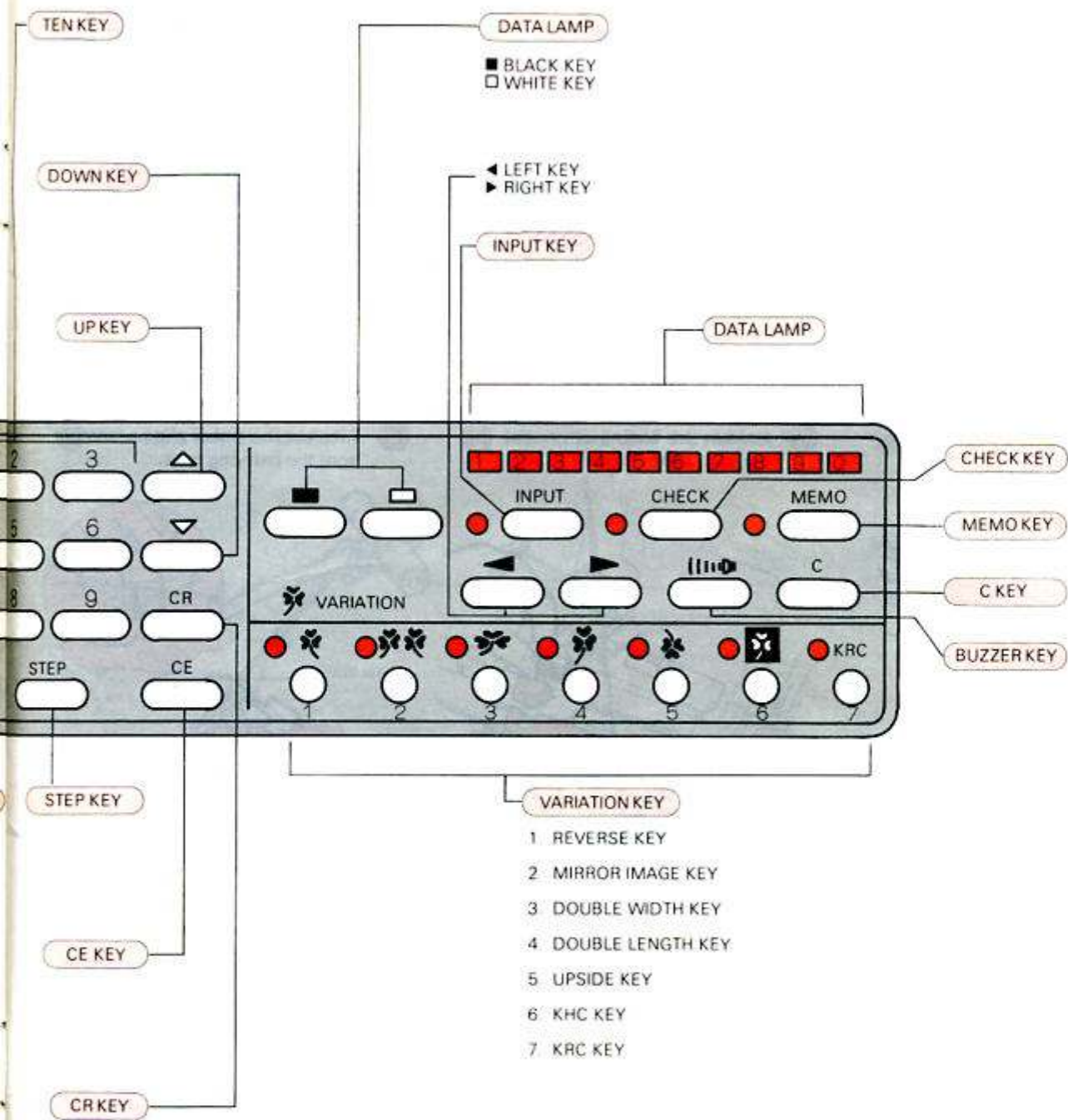
YARN WAX



● OPERATION PANEL



Used for transferring the data between the cartridge (option) and the knitting machine.

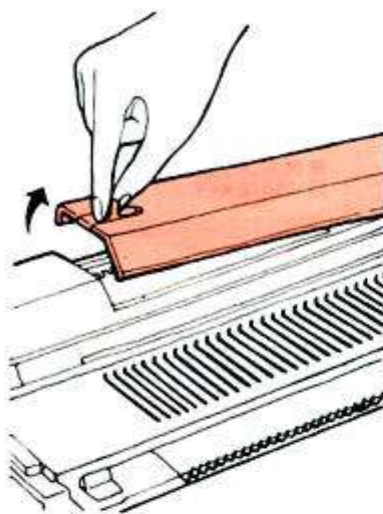


SETTING-UP THE KNITTING MACHINE

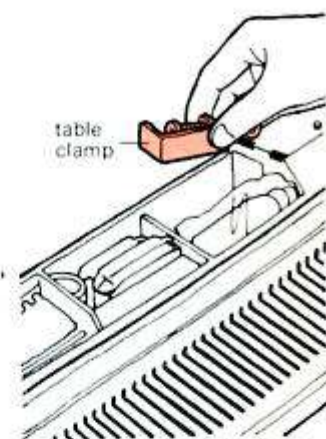
- ① Place the machine on a firm table, with the carrying case handle away from you and unlock the catches. Lift up the case top and pull it towards you to release the lid.



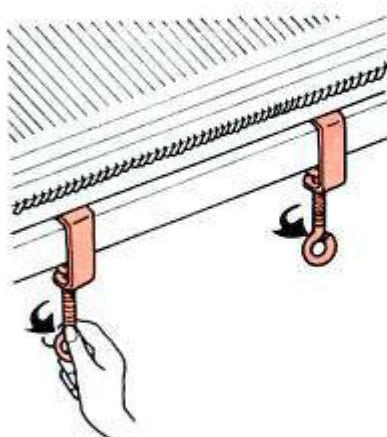
- ② Open the accessory box.



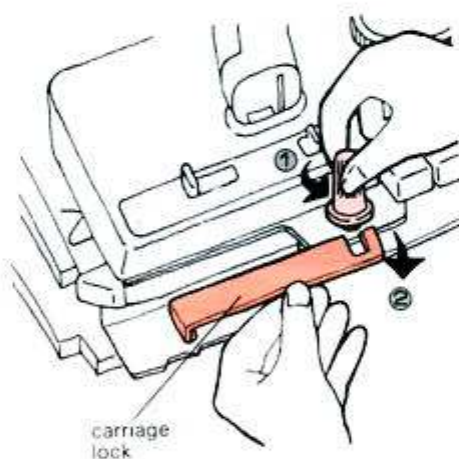
- ③ Take two table clamps out of the box.



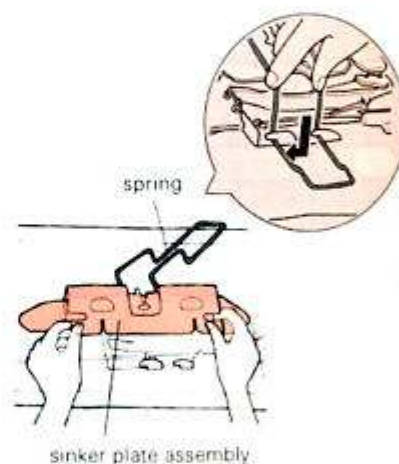
- ④ Fasten the machine to the table by the table clamps.



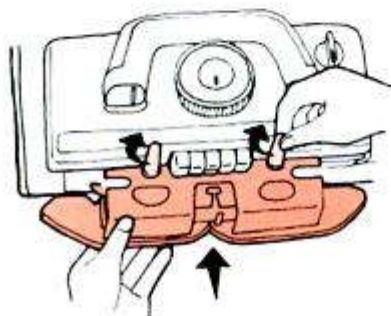
- ⑤ Loosen the knob and remove the carriage lock.



- ⑥ Take out the sinker plate assembly from the carrying case.



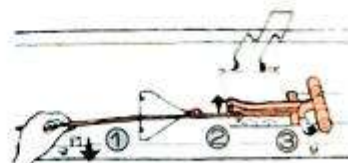
- ⑦ Screw the sinker plate assembly on the K carriage.



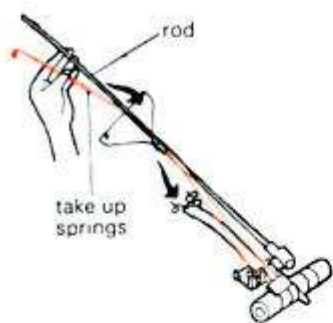
- ⑧ Pull the carriage handle up towards you.



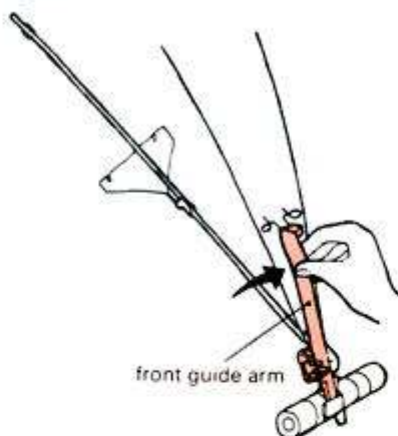
- ⑨ Take the yarn tension unit out of the carrying case lid in the order ①, ②, ③ as shown.



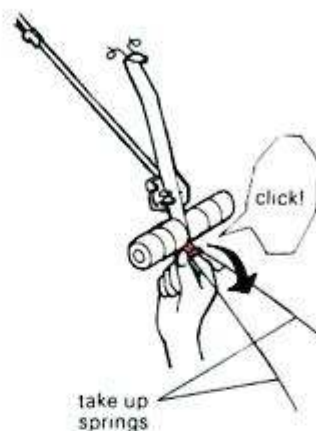
⑩ Release the take up springs.



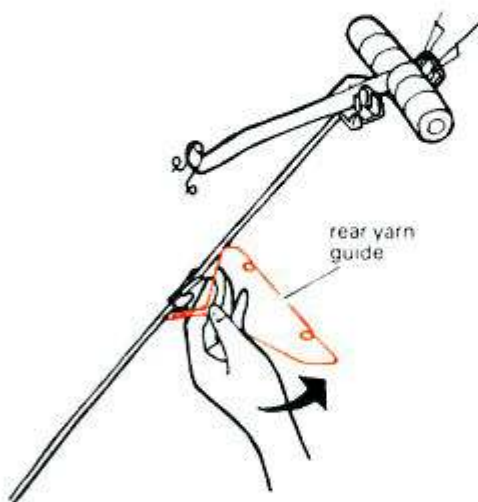
⑪ Pull up the front guide arm as far as it goes.



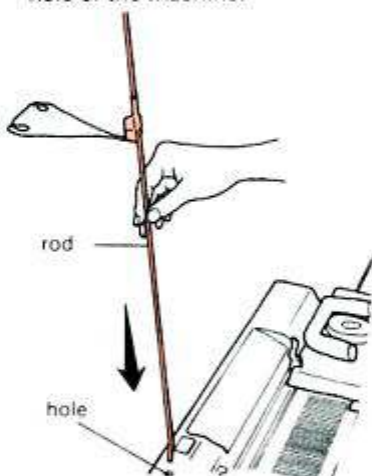
⑫ Then pull up the take up springs until you hear "click".



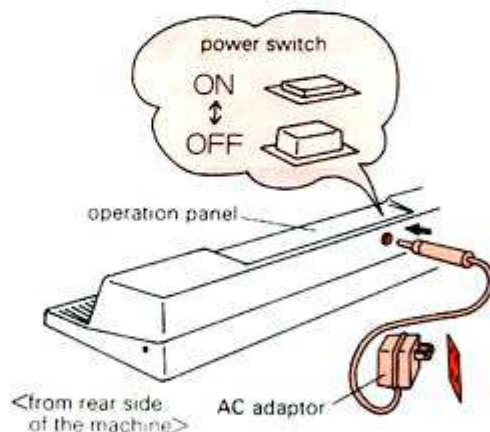
⑬ Lift up the rear yarn guide.



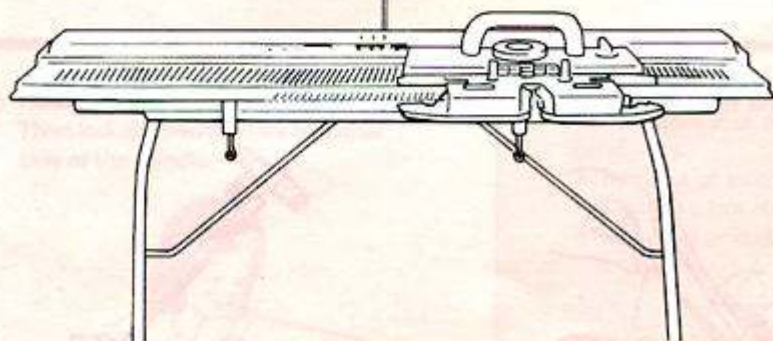
⑭ Insert the end of the rod into the hole of the machine.



⑮ After turning off the power switch, plug one end of the AC adaptor into the machine, and the other into the power supply socket and switch on. When you are not programming or going to do pattern knitting (e.g. you are only using stocking stitch) you do not need to plug the machine in.



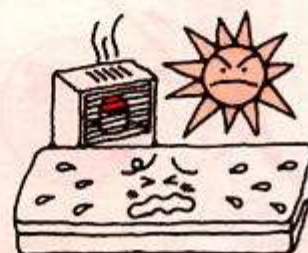
AFTER SETTING-UP



CAUTION

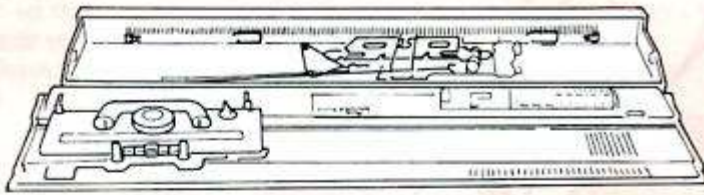
This machine is an electronic appliance which contains a micro computer, therefore do not use or leave it in the following conditions:

- In a very hot place
- In a very humid place
- In a dusty place

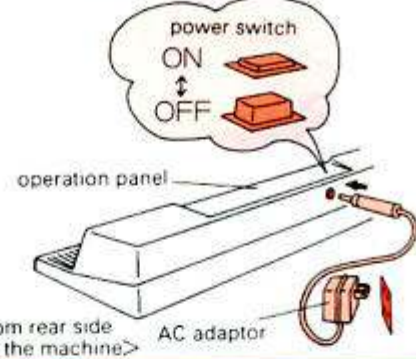


REPLACING YOUR MACHINE INTO THE CARRYING CASE

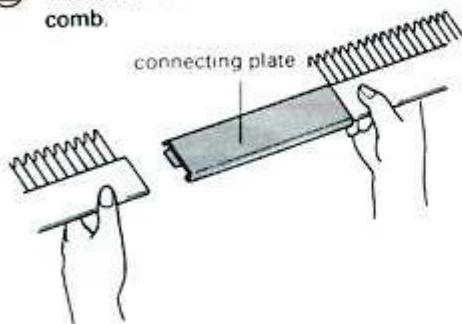
THE STORAGE CONDITION



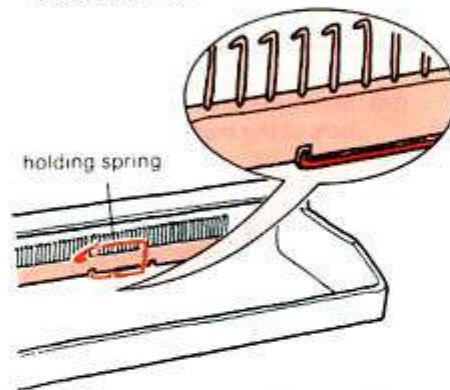
- ① After turning off the power switch, take off the AC adaptor.



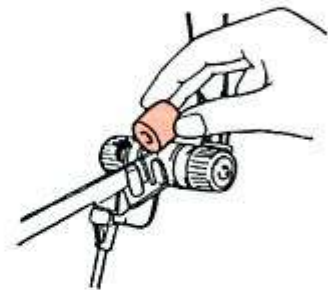
- ② Join the two sections of the cast-on comb.



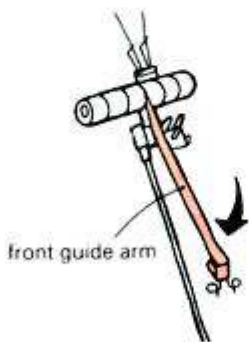
- ③ Set the cast-on comb as shown in the illustration. Then fix it with the holding springs.



- ④ Remove the wax in the case.



- ⑤ Fold down the front guide arm.



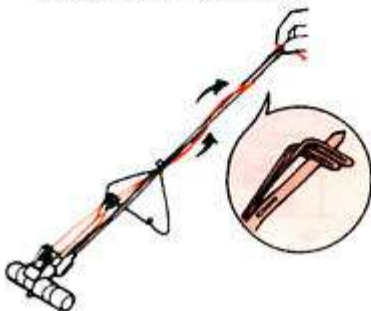
- ⑥ Wind the take up springs a few times.



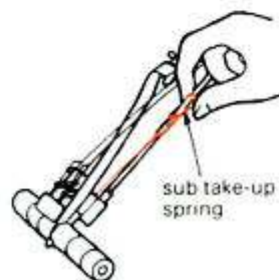
- ⑦ Fold down the take up springs.



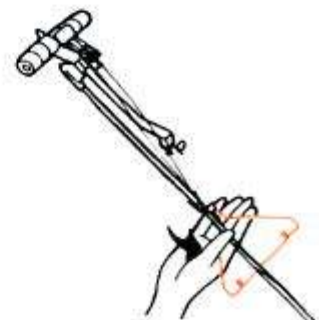
- ⑧ Wind and fix the take up springs as shown in the illustration.



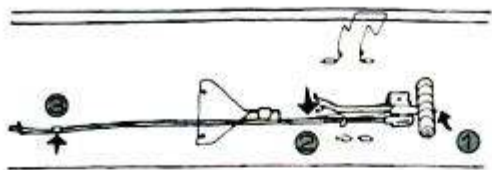
- ⑨ Put the sub take-up spring on the rod.



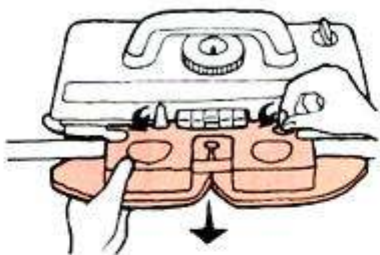
- ⑩ Fold down the rear yarn guide.



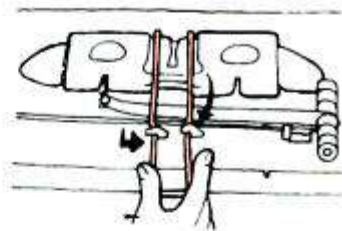
- ⑪ Replace the yarn tension unit into the case in the order ①, ②, ③ as shown.



- ⑫ Loosen the knobs and remove the sinker plate assembly from the K carriage.



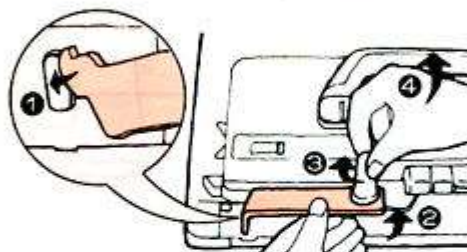
- ⑬ Put the sinker plate assembly in the case and fix it by the spring.



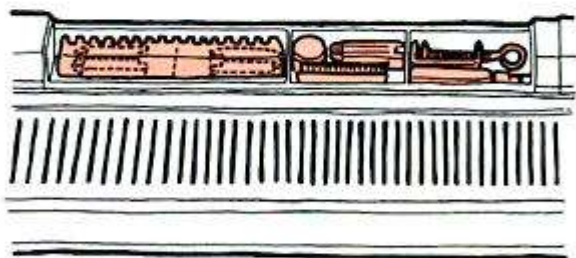
- ⑭ Fix the wheel brushes.



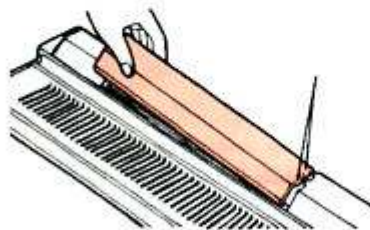
- ⑮ Insert the carriage lock in the hole at the left of the machine and lock the carriage. Then fold down the carriage handle.



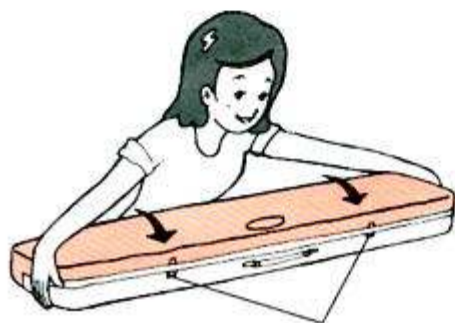
- ⑯ Remove the table clamps and put them in the accessory box with the other parts.



- ⑰ Close the lid of the accessory box.

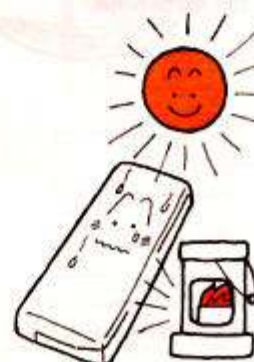


- ⑱ Hold the upper case and close it. Then lock the two catches on either side of the handle.



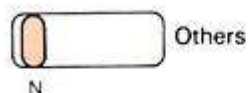
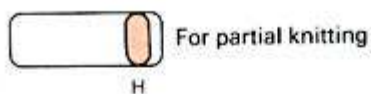
Do not store your machine in the following conditions.

- In direct or strong sunlight.
- Close to a hot object such as a heater.
- In humid or dusty places.



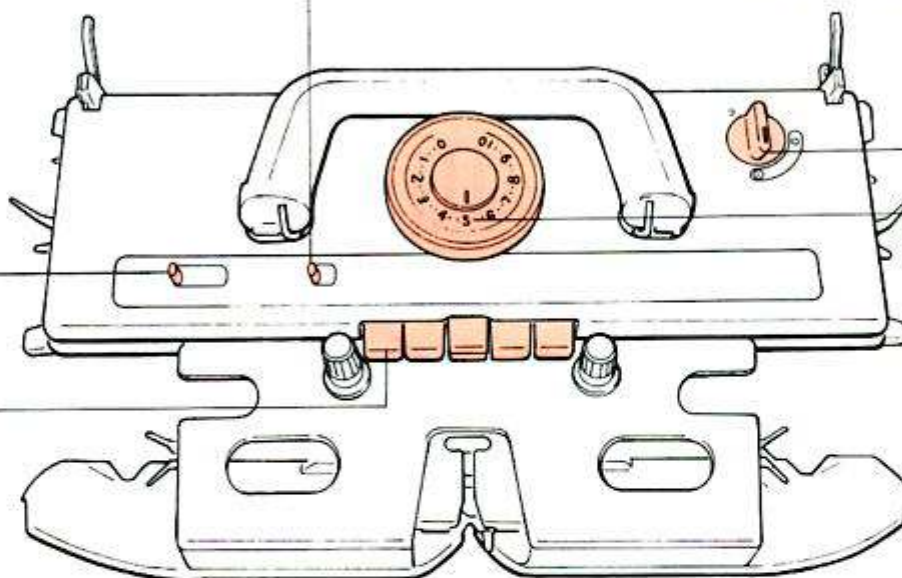
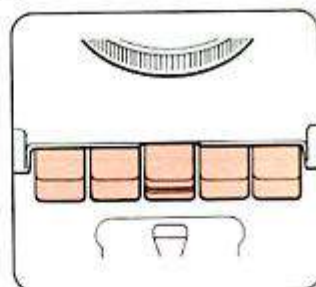
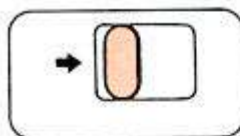
BEFORE STARTING TO KNIT

● HOLDING CAM LEVER



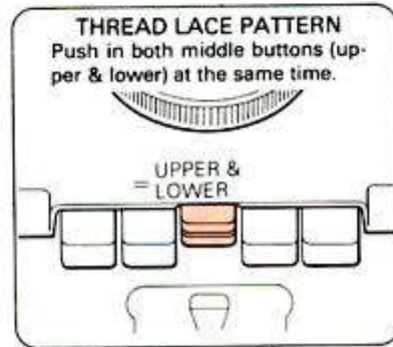
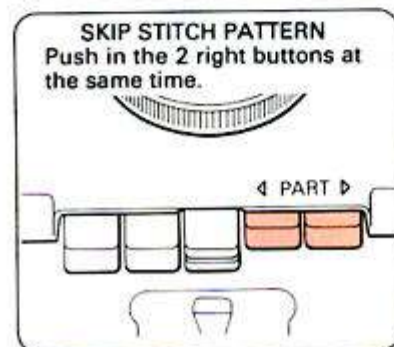
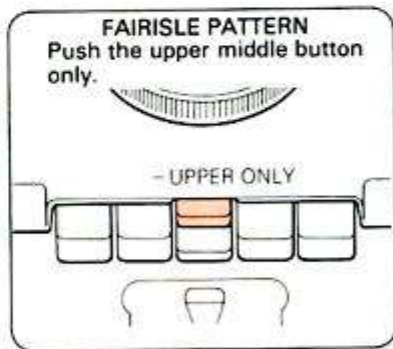
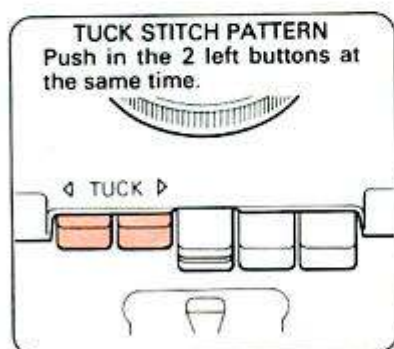
● CAM BUTTON RELEASE LEVER

Release the cam buttons by sliding the cam button release lever to the right.



● CAM BUTTONS

Use the cam buttons according to the pattern you want.

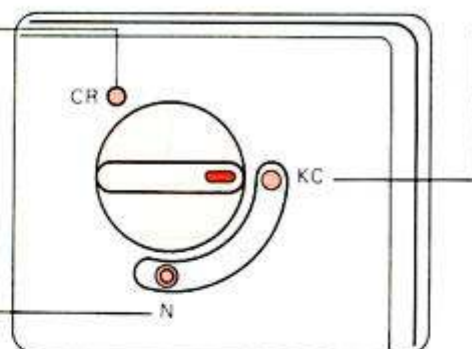


♣ Do not operate the K carriage if you have depressed both middle buttons (upper & lower) plus either the tuck button, or the part buttons.

● CHANGE KNOB

CR
This setting is used to release the K carriage from the needle bed.

N
This setting is used for stocking stitch and plating.



KC
This setting is used for pattern knitting such as tuck, skip, weaving, fairisle, thread lace, etc.

During pattern knitting, the needles are automatically set into B or D position according to the pattern.



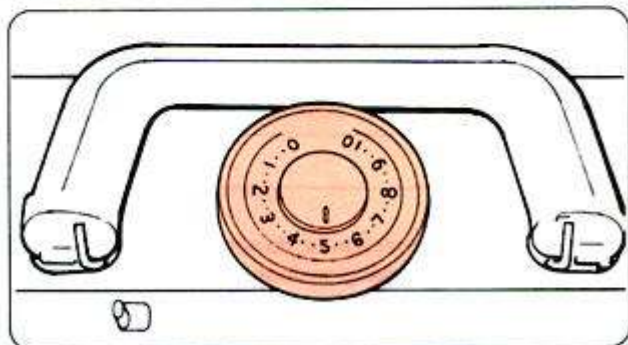
- ♣ The cam buttons are automatically released when you set the change knob to N.

● TENSION DIAL

This dial is graduated from 0 to 10, each space being subdivided into three parts.

The size of stitch is adjusted by the tension setting on the carriage tension dial. 0 denotes the tightest tension (i.e. the smallest stitch) and 10 is the loosest tension (i.e. the largest stitch).

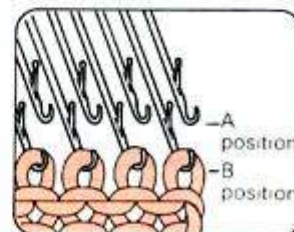
Adjust the dial according to the thickness of the yarn.



YARN	RECOMMENDED TENSION DIAL SETTING
Thick yarn	0 – 4
Chunky yarn	4 – 8
Very chunky yarn	8 – 10
* Very chunky yarn	4 – 7

As there are so many different types of yarn, it is impossible for us to tell you which tension dial number you should use. You must decide for yourself which is correct for your yarn by working sample swatches. Use the information above as a rough guide only.

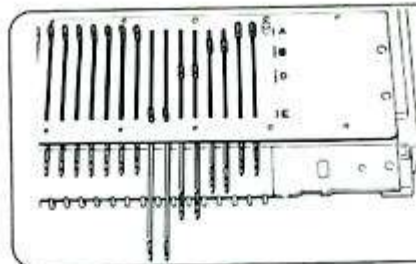
* For very chunky yarns, you may use every other needle for easy carriage operation.



● NEEDLE POSITIONS

On both sides of the needle bed there are the letters A, B, D, and E.

- A -- Non-working position
 - B -- Working position. Used for general knitting purposes.
 - D -- Upper working position. Selected needles are brought to this position in pattern knitting by the K carriage.
 - E -- Holding position. Used for shaping e.g. necklines, shoulders, darts.
- * When you pack your machine away, always return the needles to A position.

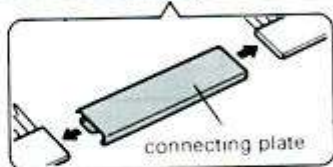


● CAST-ON COMB

The cast-on comb is in two sections of 84 and 30 needles, making a total of 114 needles.

You can take these apart by removing the connecting plate if you wish to shorten the length.

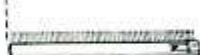
- 114 stitches



- 84 stitches

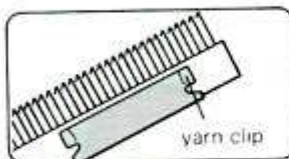


- 30 stitches



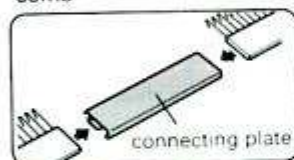
Using the connecting plate

With a 84 or 30 stitch cast-on comb



Use the connecting plate as a yarn clip by attaching it to the end of the comb.

With a 114 stitch cast-on comb

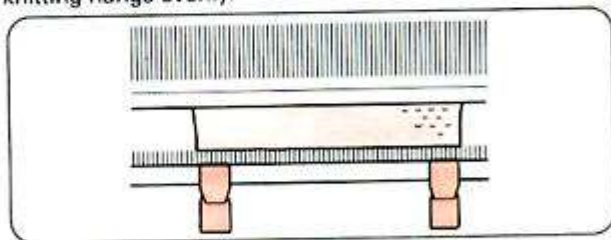


Use the connecting plate to join the two cast-on combs together.

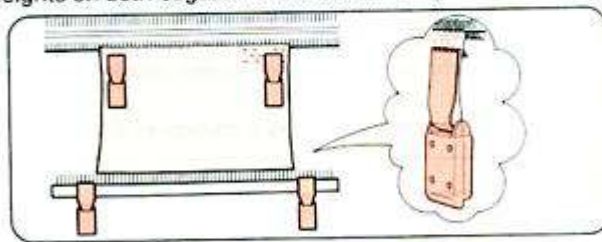
● CLAW WEIGHT

These are used to help your knitting hang properly and to prevent it from lifting up while you work.

- Hang claw weights onto your cast-on comb so that your knitting hangs evenly.



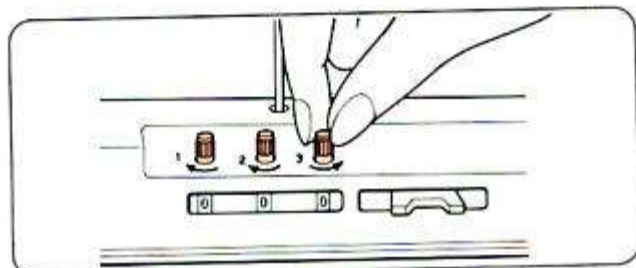
- If the edges of your knitting do not lie smoothly, hang claw weights on both edges of the actual knitting.



Rehang the weights every 20 rows or so.

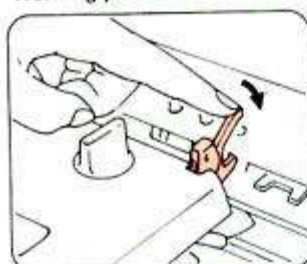
● ROW COUNTER

The row counter shows the number of rows that have been knitted with the K carriage. When you want to set the number back to 000 again, turn the knobs in the direction of the arrows.

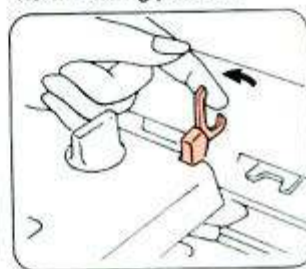


- When using the row counter, do not forget to set the right side tripper into working position.

working position



non-working position

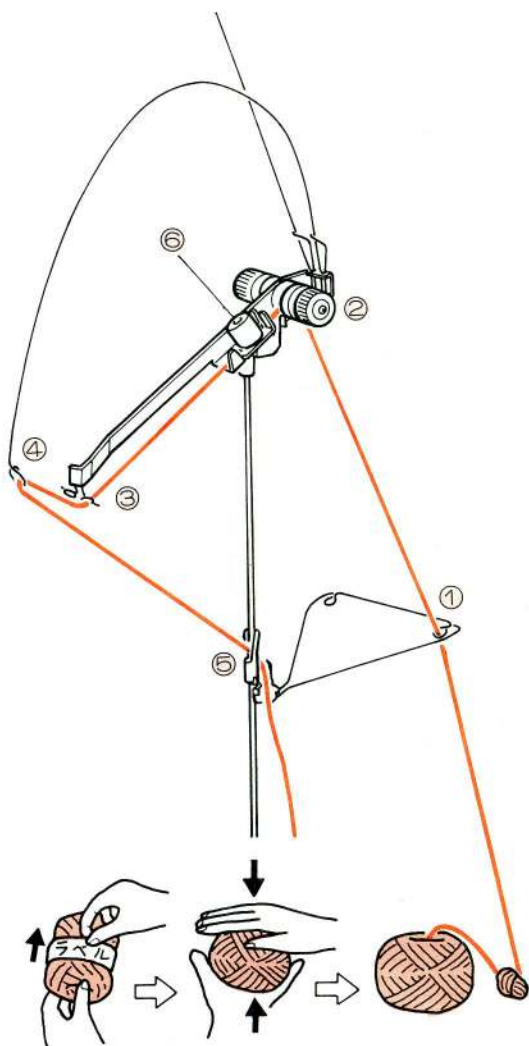


HOW TO OPERATE YOUR KNITTING MACHINE

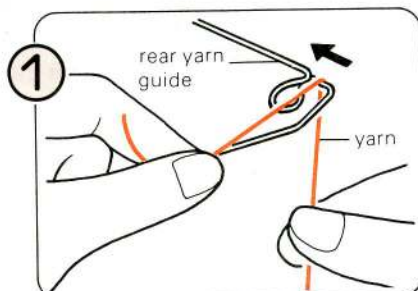
● STOCKING STITCH (Plain Knitting)

Stocking stitch is the most basic and simplest stitch in machine knitting. Practice this until you can do it correctly.

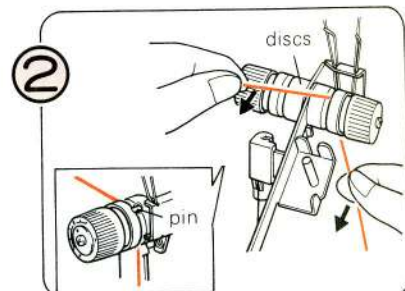
1. THREADING THE YARN



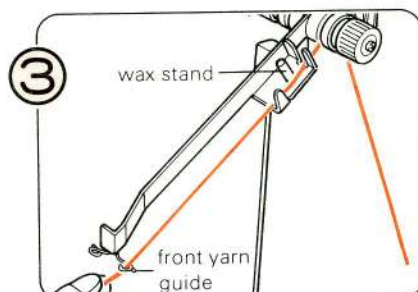
♣ See page 97 to prepare the yarn.



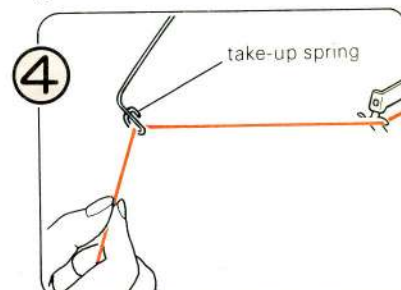
Pass the yarn from the ball through the rear yarn guide sliding the yarn through the eyelet.



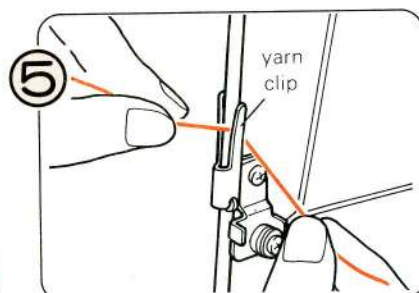
Pass the yarn under the pin and between the two discs from behind. Hold the yarn as shown above, and pull it towards you so that the yarn goes under the pin.



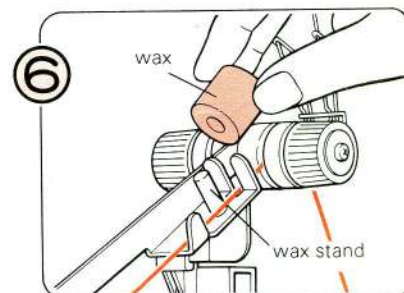
Thread the front yarn guide.



Thread the yarn into the eyelet of the take-up spring.

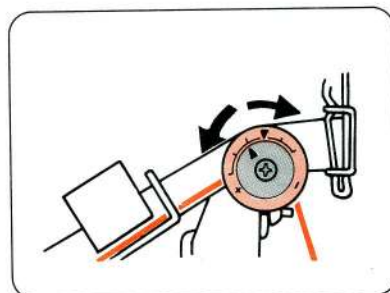


Clip the yarn under the yarn clip.



When you start knitting, set the wax from the accessory box on the wax stand.

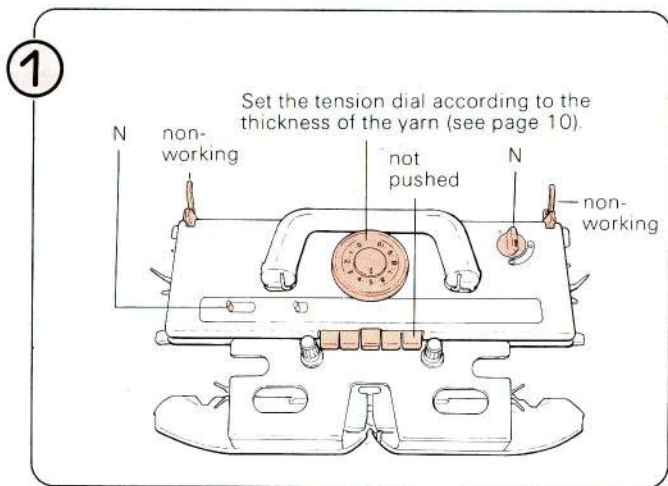
♣ The wax will help the yarn to slide more smoothly.



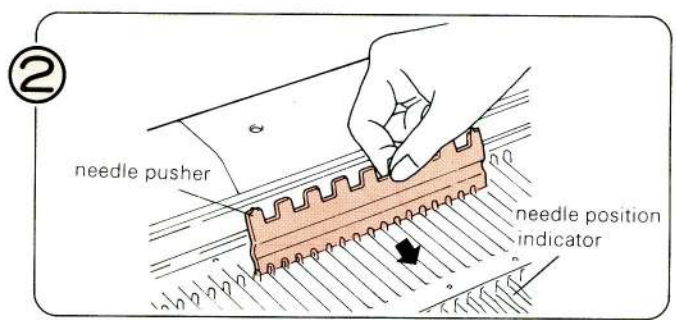
● Set the arrow mark according to the thickness of the yarn.

▶ + thicker
 ▶ - finer

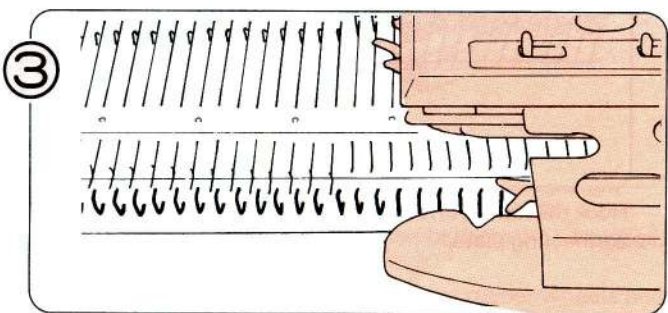
2. HOW TO CAST ON WITH A FINISHED EDGE



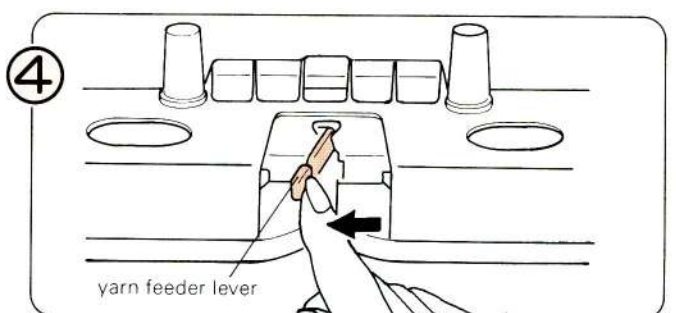
Set the K carriage as shown above.



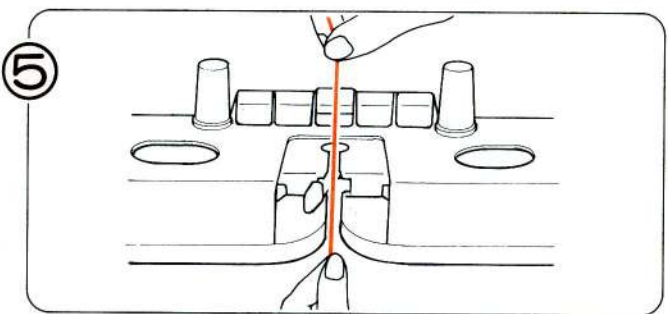
Using the flat side of the 1/1 needle pusher, bring forward needles to B position (the same number of needles on either side of the center mark 0).



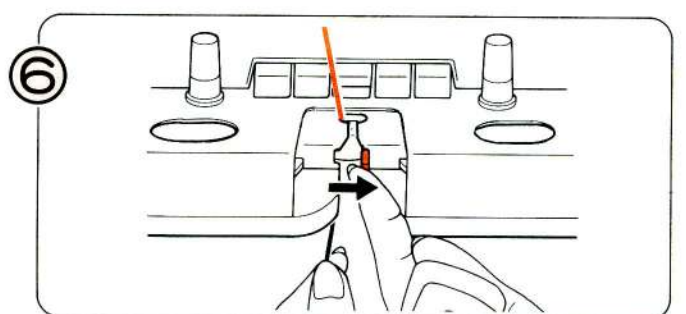
Move the K carriage across the needle bed a few times to align the needles, ending with the K carriage on the right.



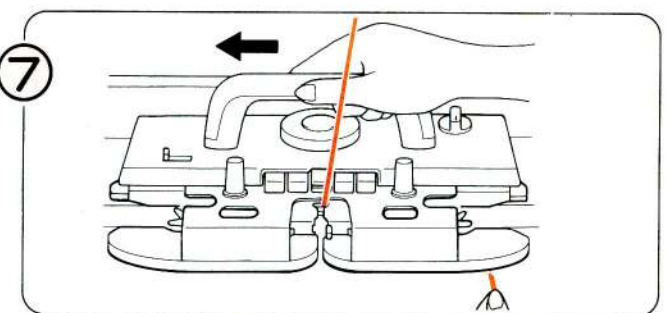
Open yarn feeder A by pushing the yarn feeder lever to the left.



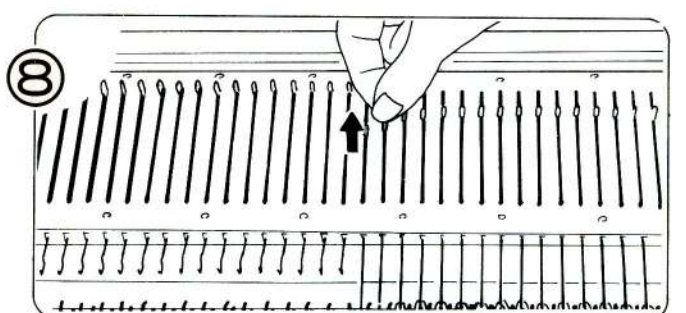
Take the yarn from the yarn clip and thread it into yarn feeder A.



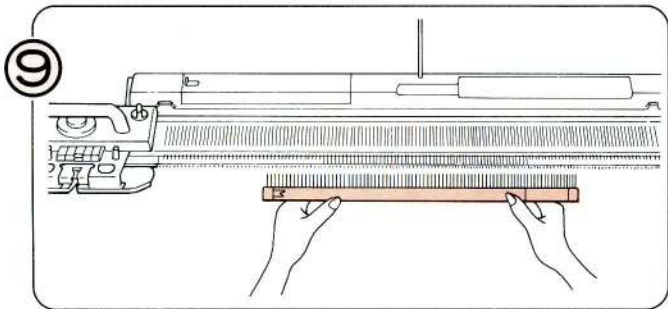
Keeping hold of the end of the yarn with your hand, close the yarn feeder lever.



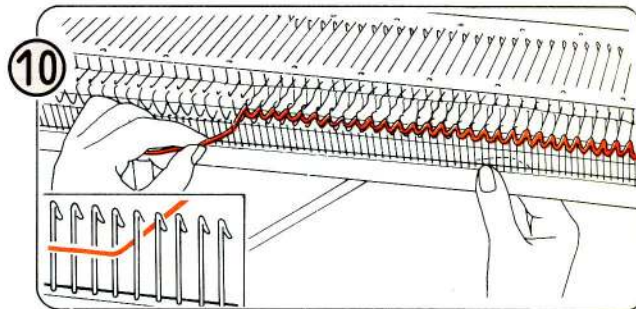
Still holding the yarn end gently, slowly move the K carriage to the left. Once you feel the needles catch the yarn, you can release the yarn end.



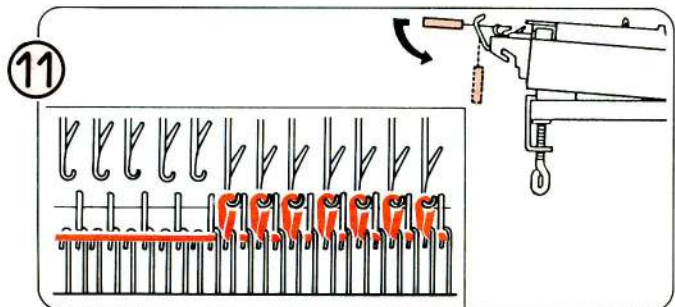
Adjust the end needle to B position.



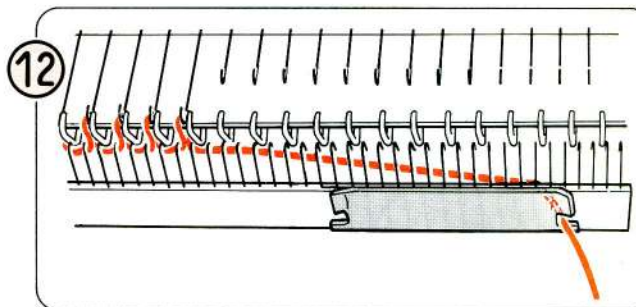
- ① Take the cast-on comb out of the case and choose the length according to the number of needles (see page 11).
- ② Hold the cast-on comb as shown with the hooks facing the machine.



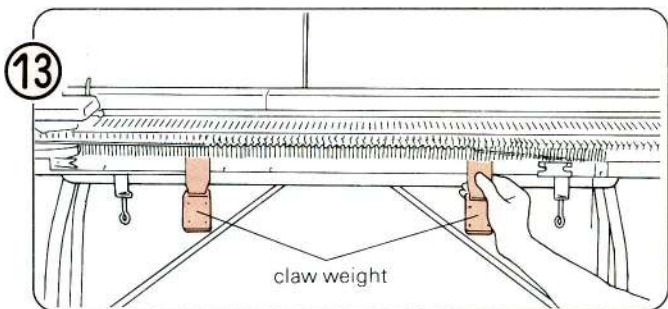
Pull the yarn through the hook towards you as illustrated.



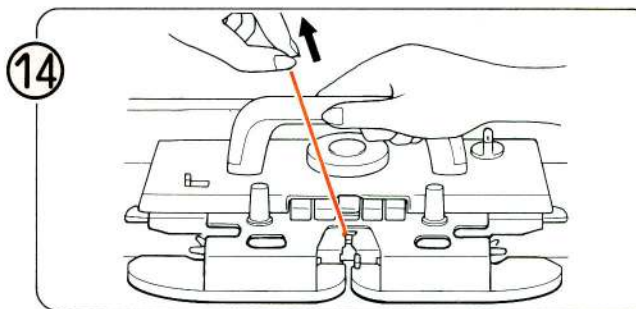
Hook the cast-on comb over the loops and let it hang down. Give the comb a gentle pull downwards.



Hook the loose yarn end under the yarn clip on the front of the connecting plate.



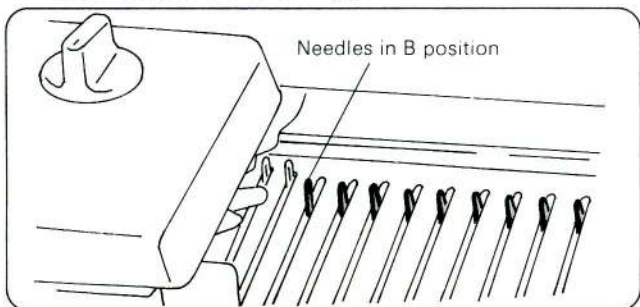
Keeping the comb horizontal, hang on the claw weight.



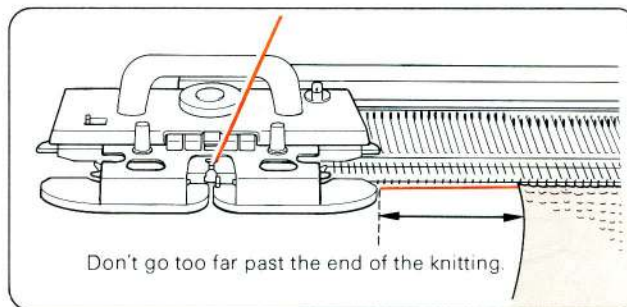
Move the K carriage to the right, holding the yarn as shown so that no loops are formed.

Before you move the K carriage

- Watch out for the following points.

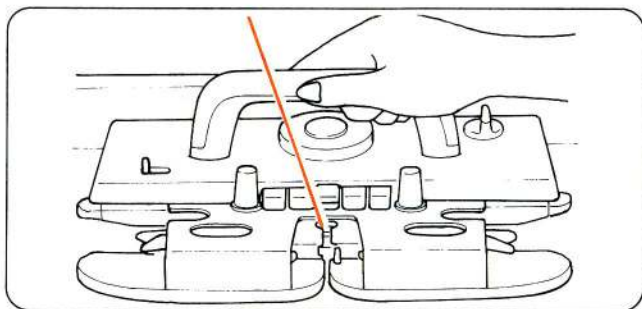


Make sure the K carriage clears the knitting before you move it back in the other direction.



Do not move the K carriage too far beyond the knitting.

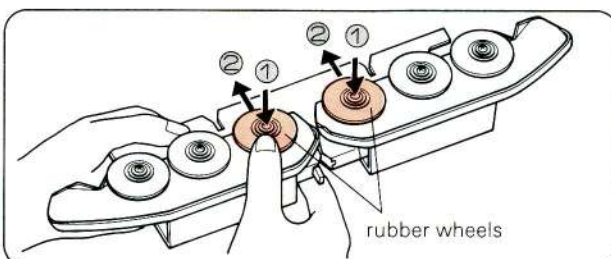
3. STOCKING STITCH



Continue moving the K carriage back and forth. This type of knitting is called "stocking stitch".

Rubber Wheels

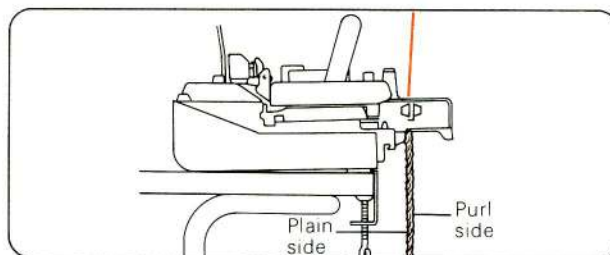
Use these if the yarn (e.g. cotton, acrylic) doesn't knit properly



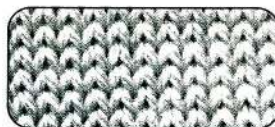
- These are set in working position as follows:
 - (1) Remove the sinker plate assembly from the K carriage, and turn it over.
 - (2) Place your thumb onto one of the rubber wheels and slide the wheel forward. Do the same for the other rubber wheel.
- ♣ Reverse the above action to return the rubber wheels to non-working position.

Plain & purl sides of your knitting

- You can use whichever side you prefer as the right (face) side when you sew up your garment.



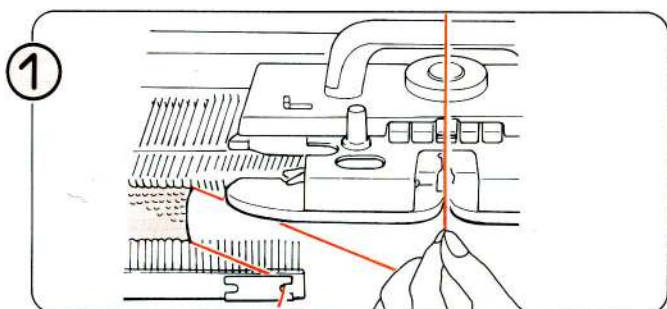
• Plain side



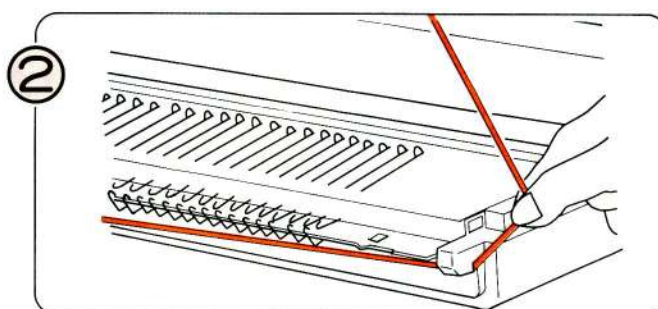
• Purl side



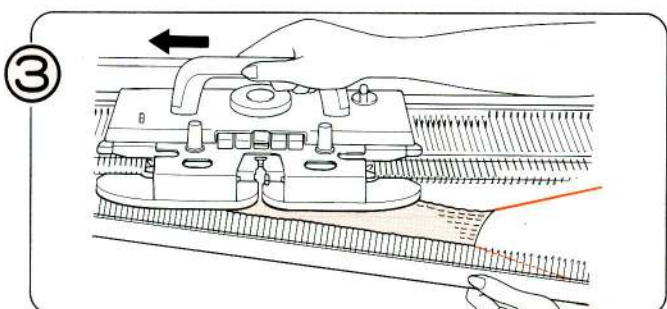
4. HOW TO REMOVE YOUR KNITTING FROM THE MACHINE



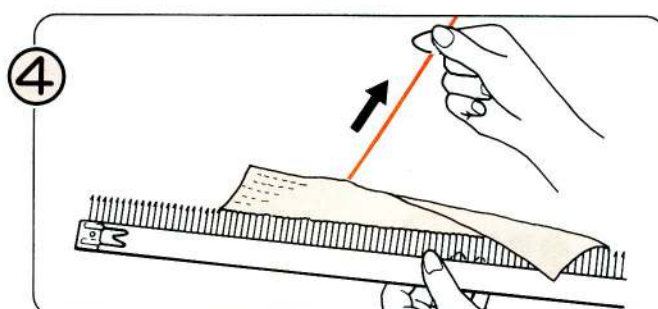
Remove the claw weights and take the yarn out of yarn feeder A.



Secure the yarn by hooking it into the slot at the edge of your machine.



To release the knitting, move the empty K carriage slowly, at the same time supporting the knitting with your other hand.



As the knitting has not been finished off and the stitches are open loops, it will unravel easily.

PROGRAM

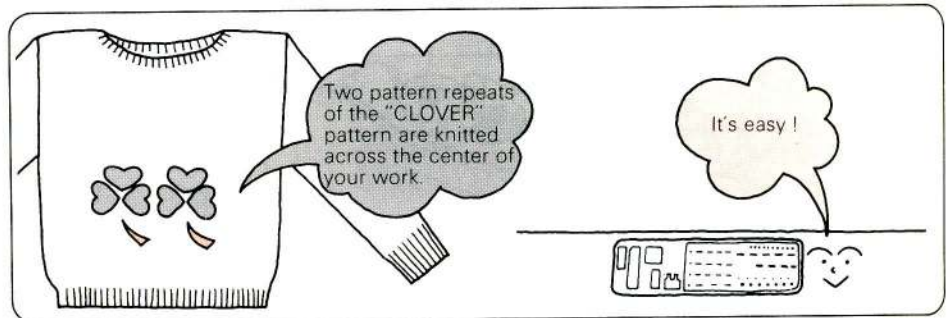
HOW TO PROGRAM

WHAT IS A PROGRAM?

- PROGRAM means telling the computer what functions you want the knitting machine to perform. Built into the computer memory are 288 different stitch pattern designs, so in order to knit one of them, you must tell the computer. Should you want to design your own stitch pattern, you must store this in the memory of the computer. (You can also delete this information when it is no longer needed). Take time to learn the functions of the computer and you will enjoy your knitting machine to the full.

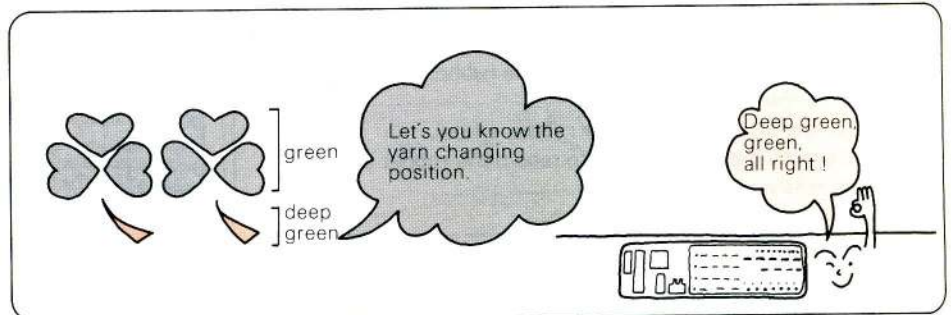
PATTERN PROGRAM

When you want the machine to knit a particular stitch pattern, you must enter this information by using the Pattern Program.



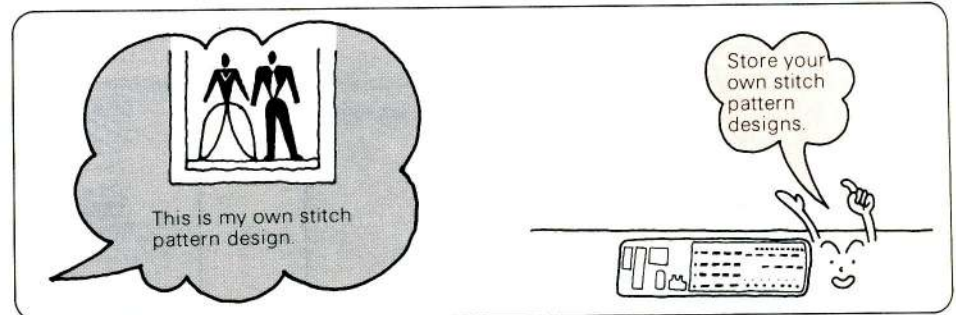
MEMO PROGRAM

This is used to know where to change colour of yarn, etc.



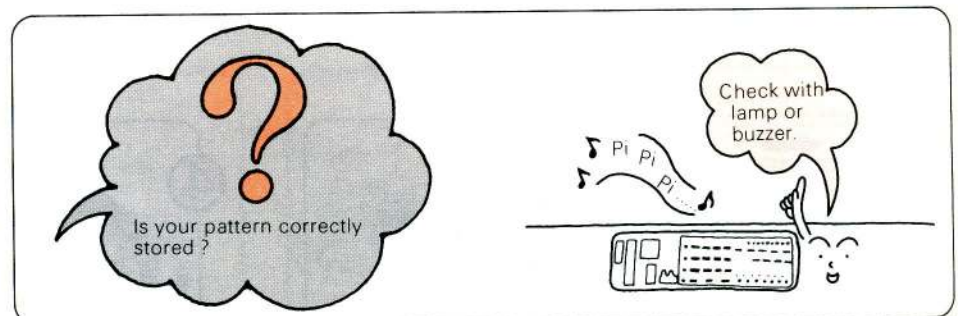
INPUT PROGRAM

When you want to enter your own stitch pattern design, use the INPUT Key. (You can also delete it).



CHECK PROGRAM

Use the CHECK Program to ensure you have entered all the information correctly.



PATTERN PROGRAM

● HOW TO SELECT THE PATTERN

You will have, with your machine the special pattern book. This pattern book shows in full colour the 288 beautiful stitch pattern designs which are built into the memory of the computer. Choose your design and enter the number into the computer.

Let's say for example you would like to knit the "CLOVER" stitch pattern design.

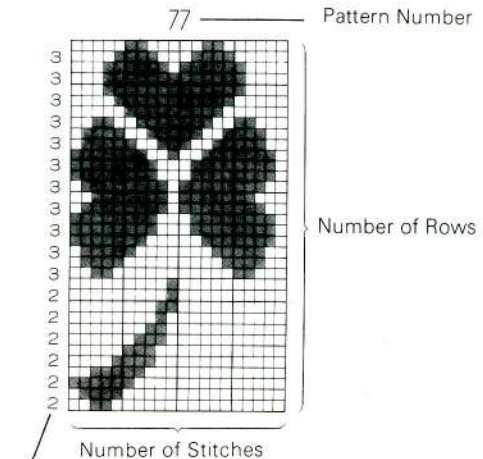
You should simply enter 77.

- ♣ You may want to knit this fairisle design in more than two colours.

Should this be the case, refer to the back section of the pattern book. Where all the designs are clearly shown by graph, giving width and length of one pattern repeat, and showing where the yarn changes appear.

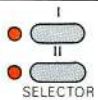
- If you want to knit your own stitch pattern design, you must learn "HOW TO STORE YOUR OWN PATTERNS" (see page 50).

DIAGRAM SHOWING ONE PATTERN REPEAT OF A STITCH PATTERN DESIGN



The number of contrast yarn is shown in the memo display.

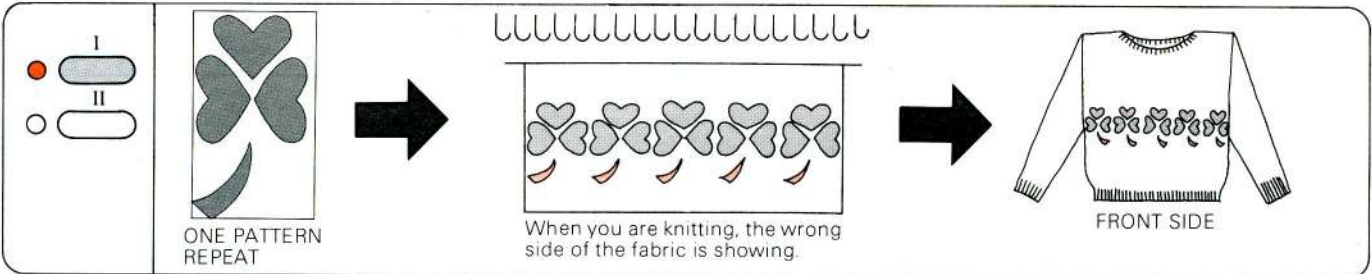
● SELECTORS



There are two "SELECTOR" on the panel. You have to decide which one you want to use.

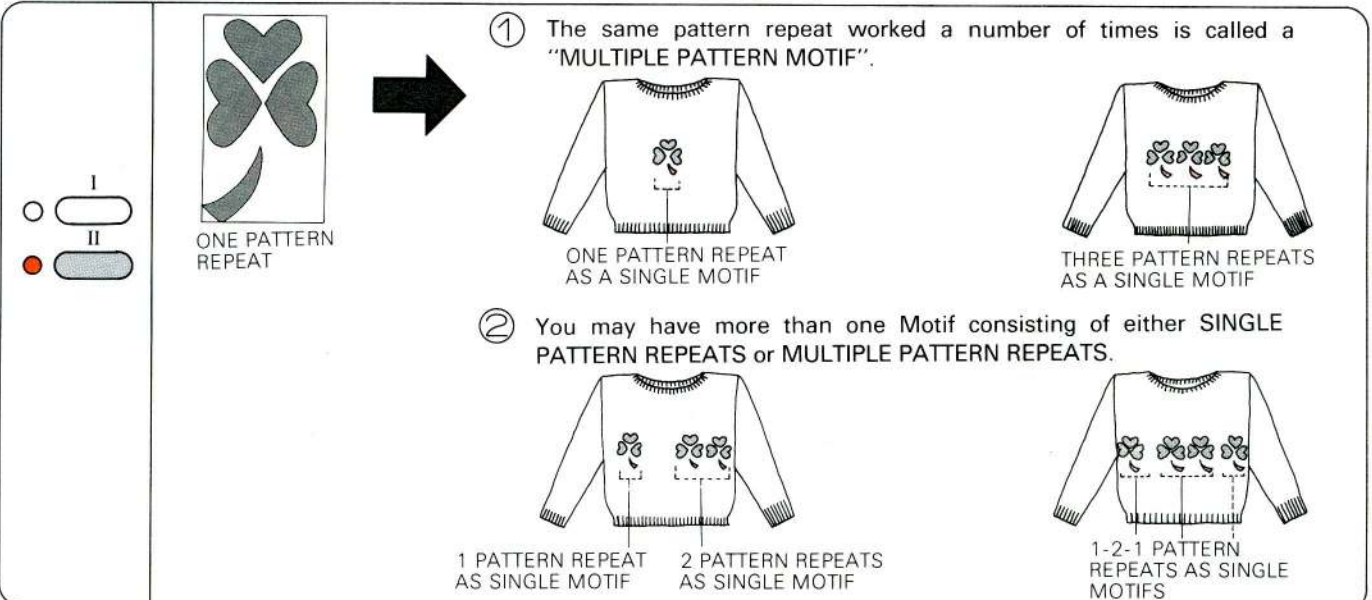
● SELECTOR I

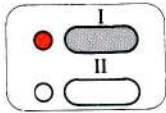
All-over patterning. (Refer to page 19).



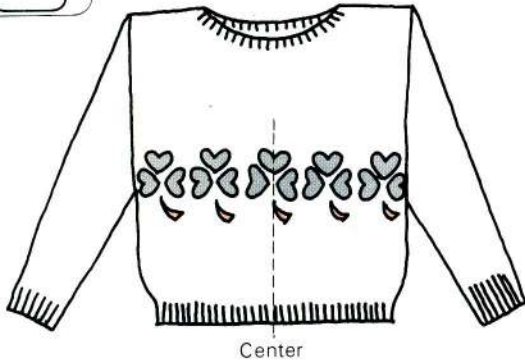
● SELECTOR II

A number of pattern repeats specifically positioned. (Refer to page 25.)





ALL OVER PATTERNING USE SELECTOR I (Pattern A)



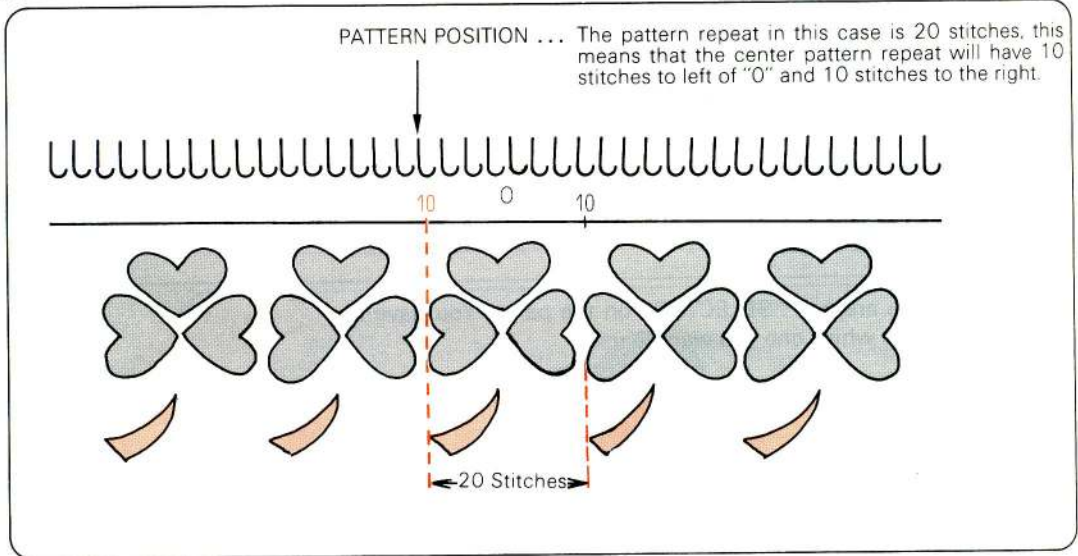
- When you program for an all over pattern, the pattern repeat is placed over the center of the needle bed.

- When you have chosen SELECTOR I you simply enter the number of the stitch pattern design and machine will automatically knit the pattern repeat, placed over the center of the needle bed, as an all over stitch design.

Pattern No. 77.



20 Stitches



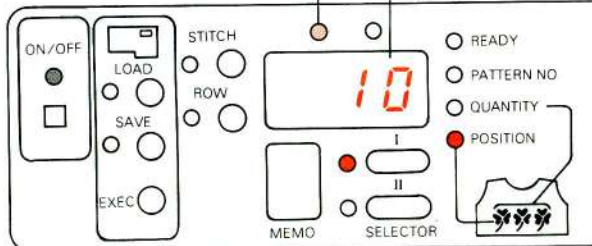
PATTERN POSITION

- The position of the pattern repeat is determined by the left end needle of that pattern repeat. The needle bed is divided into two halves, the left being referred to as Yellow (Y) and the right being referred to as Green (G).

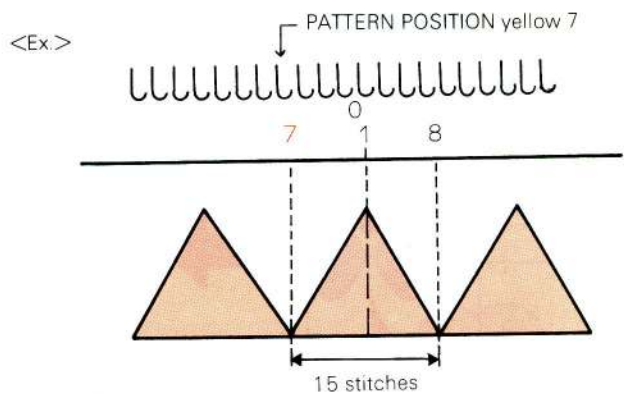
When working "ALL OVER PATTERNING" the stitch pattern repeat is centered automatically.

needle number

When the left end needle of the stitch pattern repeat is at the left, the yellow (Y) lamp is lit.



- When one pattern repeat consists of an odd number of stitches, the center needle is automatically placed on G1.



The program for all over patterning is completed when you have entered the pattern number and the position of the left end needle for one stitch pattern repeat.

■ HOW TO PROGRAM (PATTERN PROGRAM)

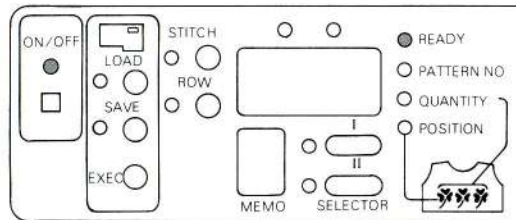
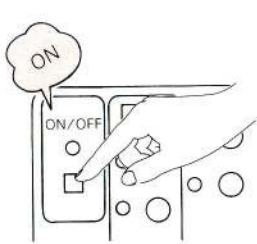


- The following example uses stitch design, 77 from the pattern book.



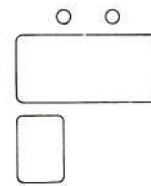
• Before entering your program

- ① Switch on the power.



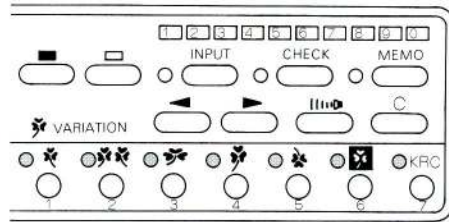
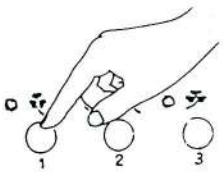
When the power is turned on, the ready lamp lights up. Any information displayed on the panel relates to before the power was turned off.

INDICATION OF THE OPERATION PANEL



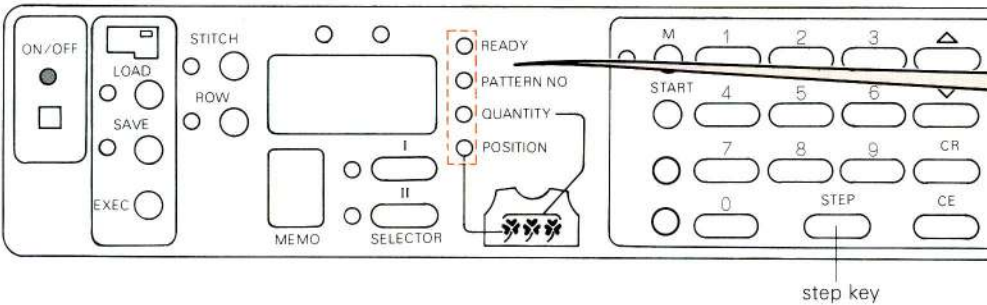
● READY
Start to enter your program when this lamp is lit.

- ② Ensure that all the variation lamps are out.



- ♣ Should any of the variation lamp be lit, they can be turned off by pushing them.

• PATTERN PROGRAM

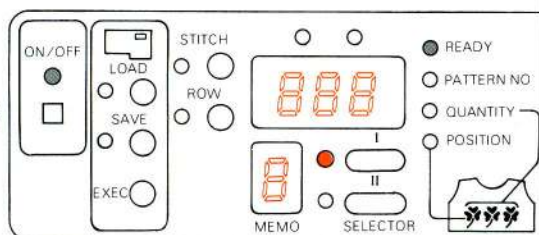
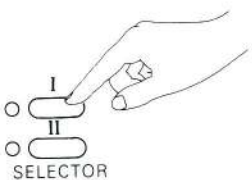


Push the step key and these lamps are lit in order.

STEP 1

Choose the selector I or II.

Push selector I.



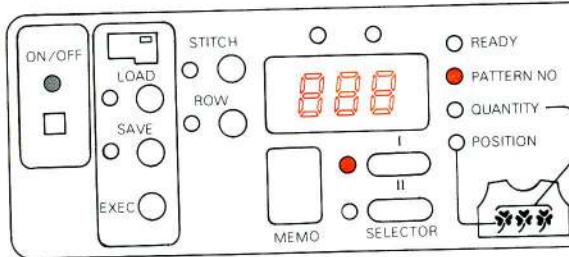
INDICATION OF THE OPERATION PANEL

- For all over patterning you should push selector I.

STEP 2

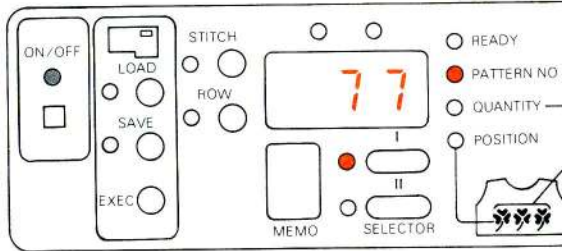
Select the pattern number which you are going to knit.

① Push the step key.



The pattern no. lamp is lit and the display shows the former pattern number.

② Push the CE key to clear the display and enter 77 as the new pattern number.

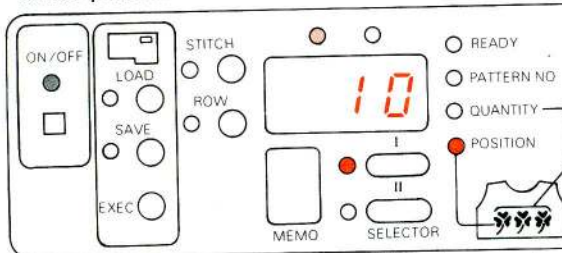


♥ Should you make a mistake, push the CE key and enter the correct figure.

STEP 3

Check the position of the left end needle of the center pattern.

Push the step key.

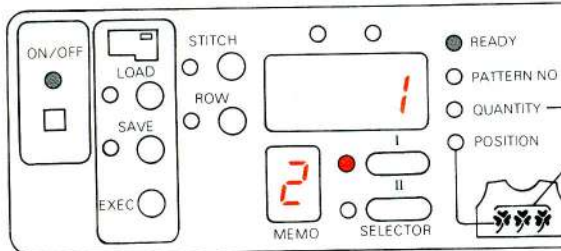


The position lamp is lit. The yellow lamp and display indicate that yellow 10 (Y10) will be the left end needle for the center pattern.

STEP 4

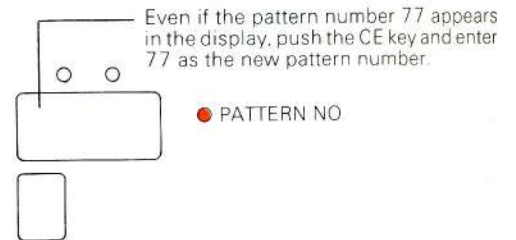
Finish the program.

Push the step key.

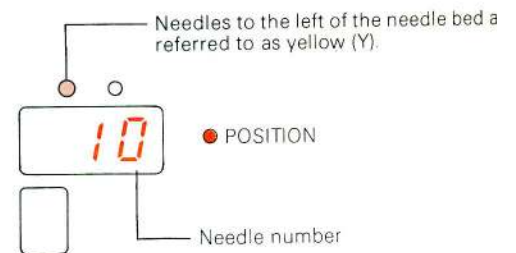


The ready lamp is lit and you have completed the program.

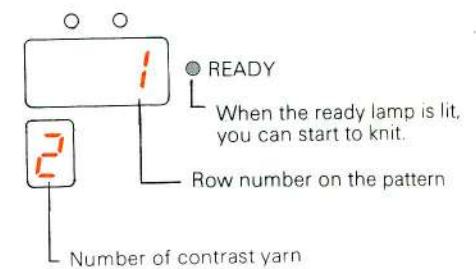
INDICATION OF THE OPERATION PANEL



Even if the pattern number 77 appears in the display, push the CE key and enter 77 as the new pattern number.



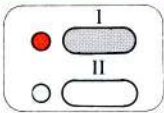
Needles to the left of the needle bed a referred to as yellow (Y).



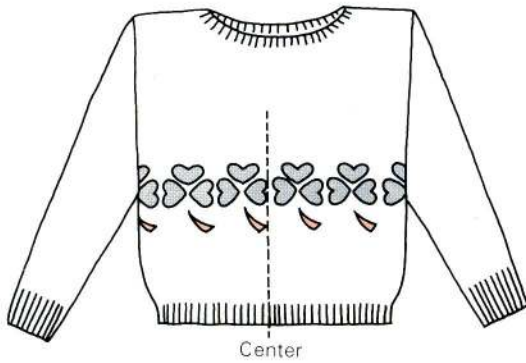
When the ready lamp is lit, you can start to knit.

- If you want to check what has been programmed in, you can do so by repeatedly pressing the step key. The program will be displayed step by step in the order in which you entered it (see page 33).
- ◆ To knit the pattern see page 65.

• If you want to return to the beginning of a program, turn off the power. When the power is switched on again the ready lamp is lit and you may start at the beginning again.



ALL OVER PATTERNING USE SELECTOR I (Pattern B)



- The pattern repeat does not have to be over the center of the needle bed. You can change its position and move it to either the right or the left.

PATTERN POSITION

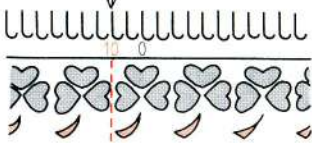
Pattern No. 77



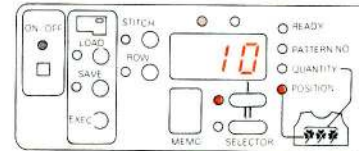
20 Stitches

- The position of the pattern repeat is determined by the left end needle of that pattern repeat.
- When the selector is set at I, the machine will automatically place the pattern repeat over the center of the needle bed, and the number of the left end needle will be shown in the display. To change the pattern position, first you must push the CE key to clear the display.

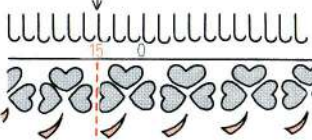
PATTERN POSITION (set by the computer)



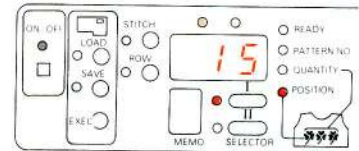
PATTERN POSITION
set automatically by the computer.



PATTERN POSITION
(set by you)

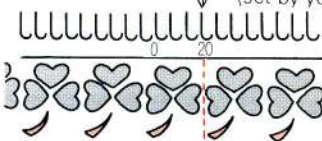


PATTERN POSITION — chosen by you.



... E.G. Enter yellow (left) 15 as the pattern position.

PATTERN POSITION
(set by you)



... E.G. Enter green (right) 20 as the pattern position.



How to enter the pattern position

Needles to the left of the needle bed are represented by yellow (Y) and to the right by green (G).

When the yellow and green lamps are flashing, you should first push either the yellow key or the green key (yellow if you want a yellow (left) needle number or green if you want a green (right) needle number). Then enter the needle number.

(Ex.)

yellow key

green key

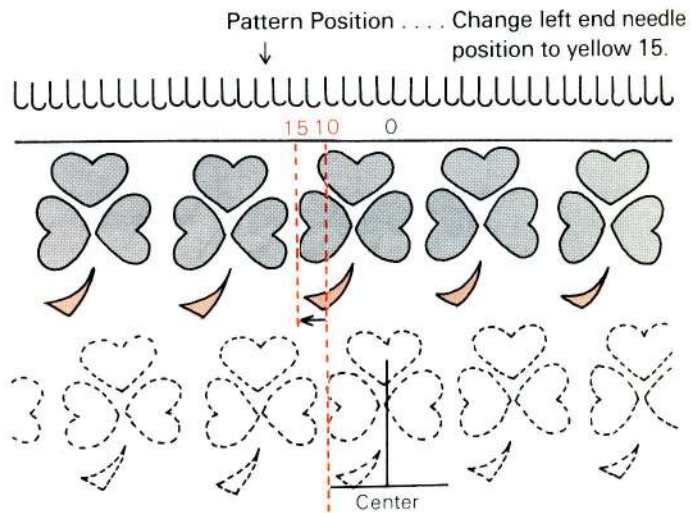


The program for all over patterning is completed when you have entered the pattern number and the position of the left end needle for one stitch pattern repeat.

■ HOW TO PROGRAM (PATTERN PROGRAM)

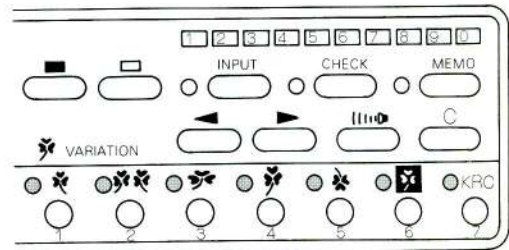
Example Change the pattern position to yellow 15 from yellow 10.

Pattern No. 77



• Before entering your program

- ① Switch on the power.
When the power is turned on, the ready Lamp lights up.
Any information displayed on the panel relates to before the power was turned off.
 - ② Ensure that all the variation lamps are out.
- ♣ Should any of the variation lamps be lit, they can be turned off by pushing them.

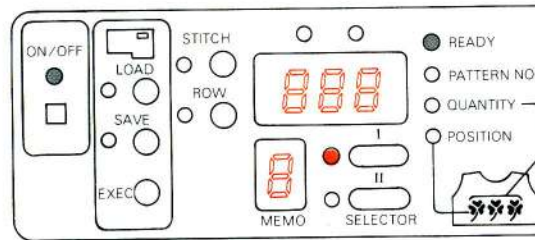
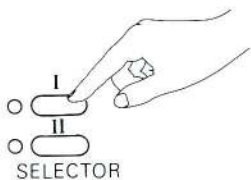


• PATTERN PROGRAM

STEP 1

Choose the selector I or II.

Push selector I.



INDICATION OF THE OPERATION PANEL

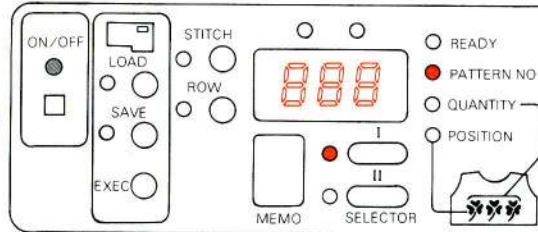
- For all over patterning, you should push selector I.

STEP 2

Select the pattern number which you are going to knit.

- ① Push the step key.

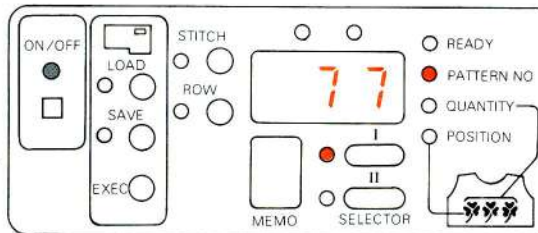
STEP



The pattern no. lamp is lit and the display shows the former pattern number.

- ② Push the CE key to clear the display and enter 77 as the new pattern number.

CE 7 7



Even if the pattern number 77 appears in the display push the CE Key and enter 77 as the new pattern number.

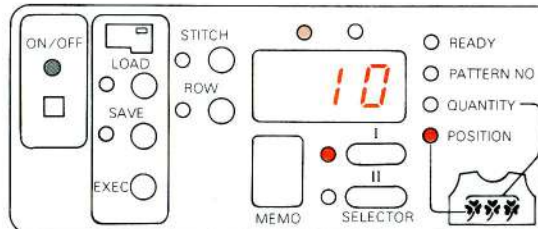
● PATTERN NO.

STEP 3

Change the position of the left end needle of the center pattern.

- ① Push the step key.

STEP



The position lamp is lit. The yellow lamp and display indicate that yellow 10 (Y10) will be the left end needle for the center pattern.

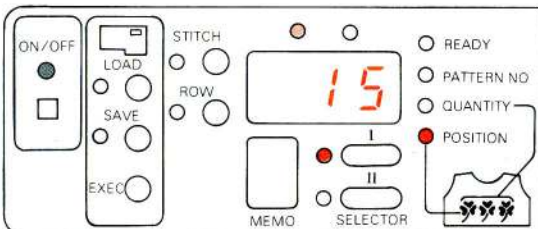
Needles to the left of the needle bed are referred to as yellow (Y).

● POSITION

Needle number

- ② Push the CE key to clear the display and enter yellow 15 as the new left end needle position.

CE Yellow 1 5



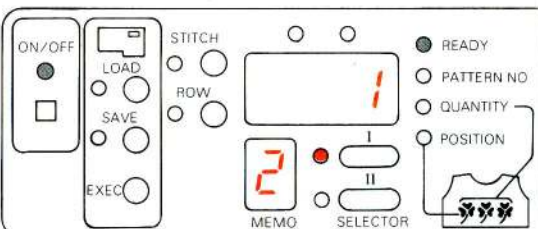
You can change the pattern position when the position lamp is lit.

STEP 4

Finish the program.

Push the step key.

STEP



The ready lamp is lit and you have completed the program.

● READY

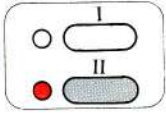
When the ready lamp is lit, you can start to knit.

Row number on the pattern.

Number of contrast yarn.

- If you want to check what has been programmed in, you can do so by repeatedly pressing the step key. The program will be displayed step by step in the order in which you entered it. (See page 33.)

- ◆ To knit the pattern see page 65.

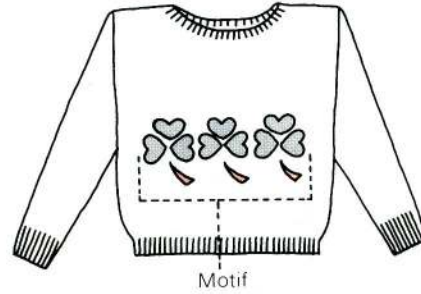
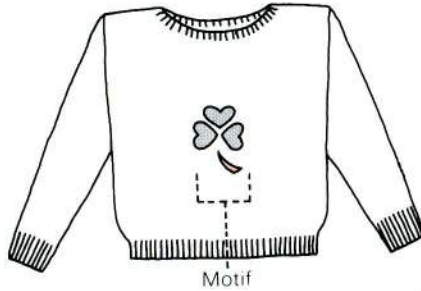


MOTIFS-USE SELECTOR II

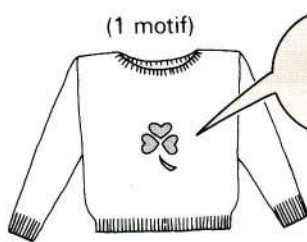
■ MULTIPLE PATTERN MOTIF

- What are "Multiple Pattern Motifs"?

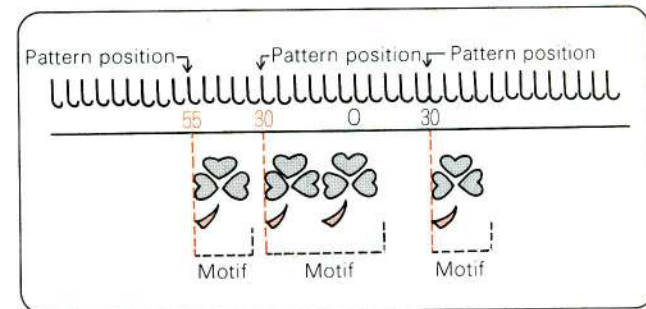
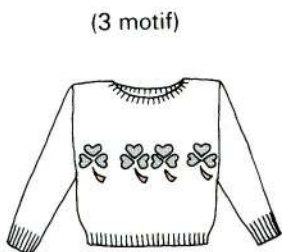
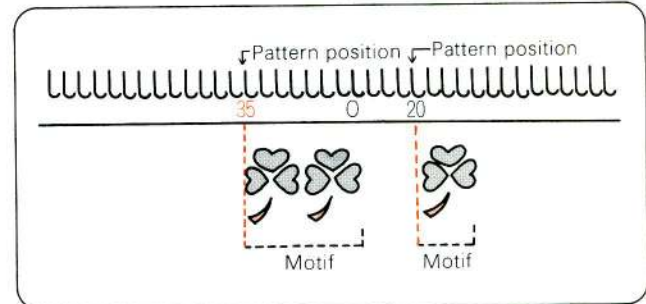
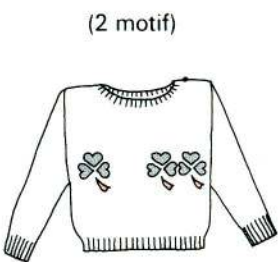
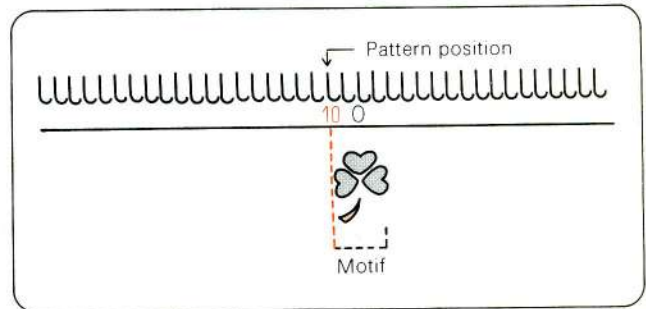
- A motif can consist of one pattern repeat (SINGLE PATTERN REPEAT) or several repeats of the same pattern (MULTIPLE PATTERN REPEAT). Even though the pattern is repeated more than once, the group of needles forming these patterns still make a motif.



- Using Selector II you can have various combinations of single and multiple pattern repeat motifs.
- Enter the number of pattern and the pattern position for each motif.



During knitting the reverse side of your work is facing you.

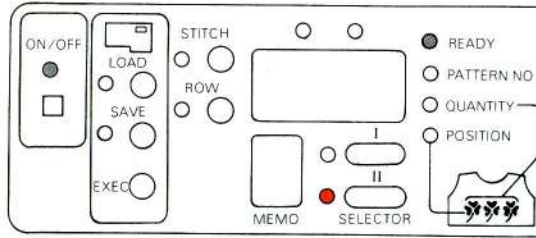
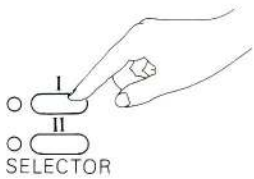


- The motifs are numbered according to the order in which you enter them, i.e. first, second, third, etc.

• **PATTERN PROGRAM**

Selector II is used for 1, 2, 3, 4, 5 and 6 pattern motifs.

① Choose the Selector II.

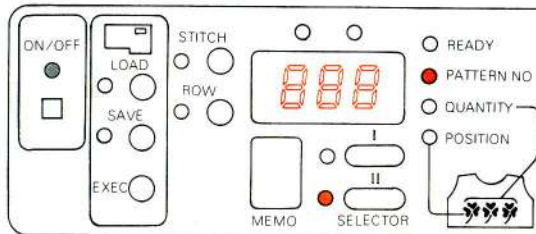


INDICATION OF THE OPERATION PANEL

② Select the pattern number which you are going to knit.



(Push the step key.)

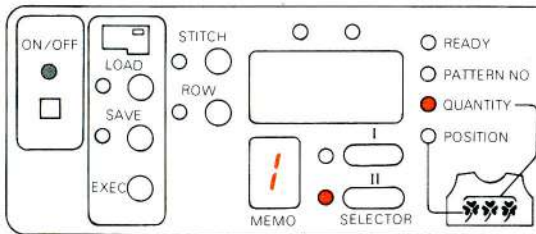


The pattern no. lamp is lit and the display shows the former pattern number. Push the CE key to clear the display and enter the desired pattern number.

③ Enter the number of patterns for the first motif.



(Push the step key.)

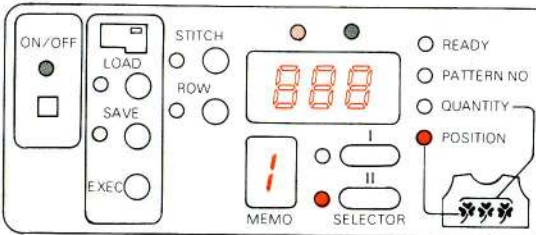


When the quantity lamp is lit, "1" appears in the memo display — the first motif. Enter the number of pattern repeats you would like the first motif to have.

④ Enter the pattern position for the first motif.



(Push the step key.)

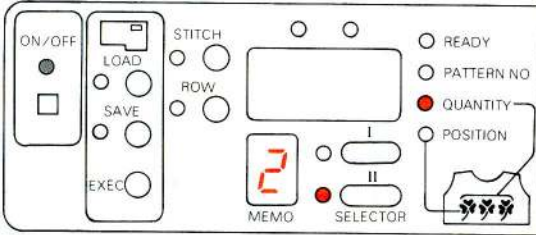


When the position lamp is lit, the display shows the position of the left end needle when centered over the needle bed. Now you must enter the left end needle position required by pressing the CE key. The yellow and green lamps will flash on and off. Press either the yellow or green key and enter the number of the new position of the left end needle.

⑤ Enter the number of patterns for the second motif.



(Push the step key.)
Motifs "3", "4", "5" and "6" are worked as motif "2".



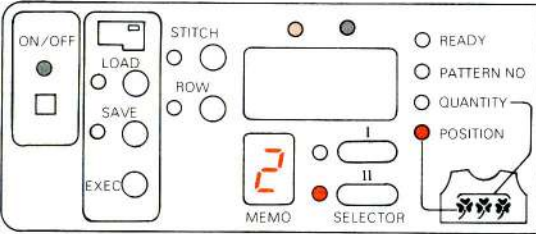
The quantity lamp is lit and the number "2" appears in the memo display — the second motif. Enter the number of pattern repeats you would like the second motif to have.

♣ Should you wish to end your program before you reach motif "6" then enter 0.

⑥ Enter the pattern position for the second motif.



(Push the step key.)

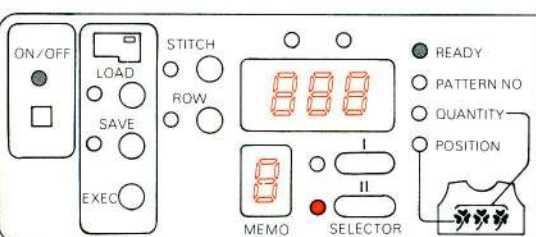


When the position lamp is lit for the second motif, the yellow and green lamps flash on and off. Press either the yellow or green key and enter the number of the position of the left end needle of that motif.

⑦ The ready lamp is lit, and you have completed the program.

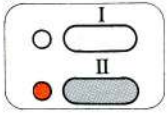


(Push the step key.)



When the ready lamp is lit, you may start to knit.

The program for multiple pattern motifs is completed when you have entered the pattern number, the number of pattern repeats in each motif and the position of the motifs.



MOTIFS - ONE PATTERN REPEAT AS A SINGLE MOTIF

<USE SELECTOR II>

■ Motif with single pattern repeat



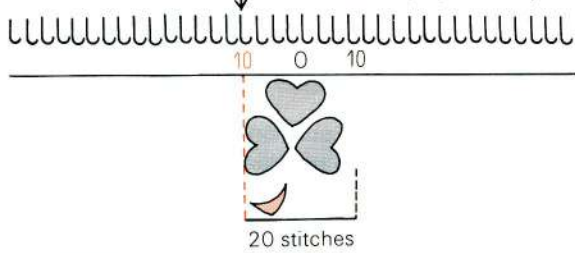
- The following example uses stitch pattern 77 from the pattern book.



PATTERN A

Ex. Knit a pattern in the center of the needle bed.

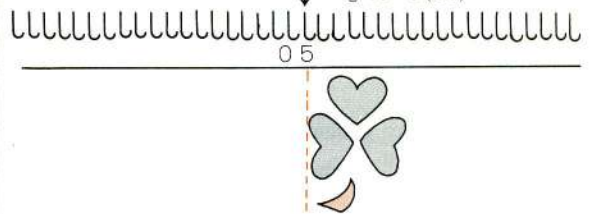
Pattern Position
Original pattern position
(yellow 10) which was placed
automatically by the computer.



PATTERN B

Ex. Move the pattern to one side from the center. Change the position from yellow 10 (placed automatically by the computer) to green 5. (G5)

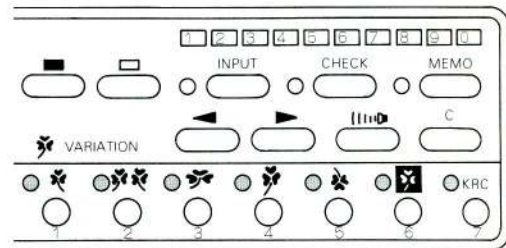
Pattern Position
green 5 (G5)



- ♣ The programming of both the above patterns is identical, so proceed as follows:

• Before entering your program

- Switch on the power.
When the power is turned on, the ready lamp lights up. Any information displayed on the panel relates to before the power was turned off.
 - Ensure that all the variation lamps are out.
- ♣ Should any of the variation lamps be lit, they can be turned off by pushing them.

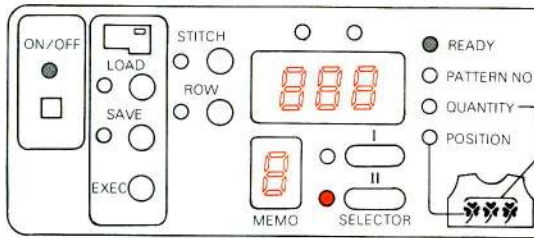
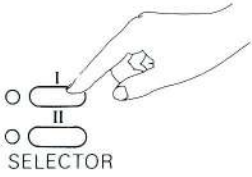


• PATTERN PROGRAM

STEP 1

Choose the selector I or II.

Push selector II.



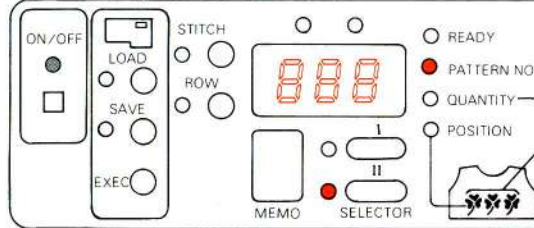
INDICATION OF THE OPERATION PANEL

• Choose Selector II because you want to knit multiple pattern motifs.

STEP 2

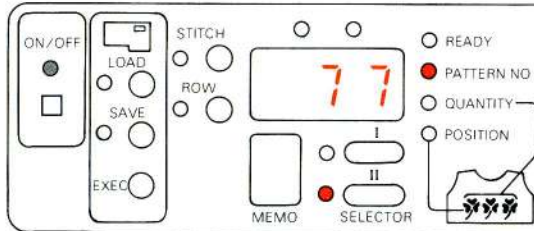
Select the pattern number which you are going to knit.

① Push the step key.

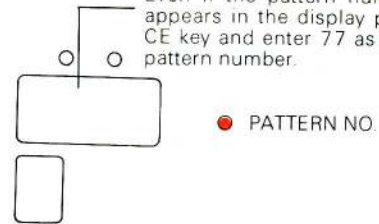


The pattern no. lamp is lit and the display shows the former pattern number.

② Push the CE key to clear the display and enter 77 as the new pattern number.



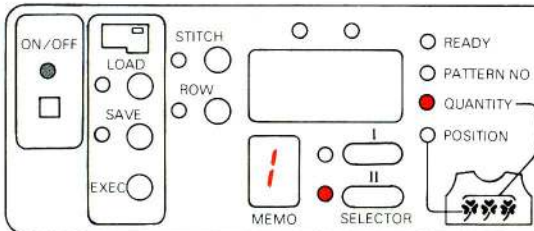
Even if the pattern number 77 appears in the display push the CE key and enter 77 as the new pattern number.



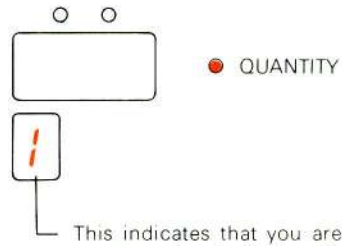
STEP 3

Enter the number of pattern repeats in the first motif.

① Push the step key.

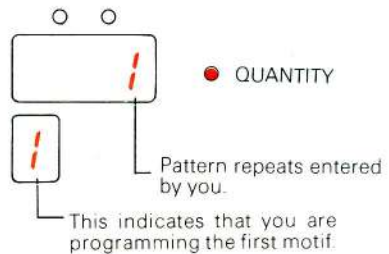
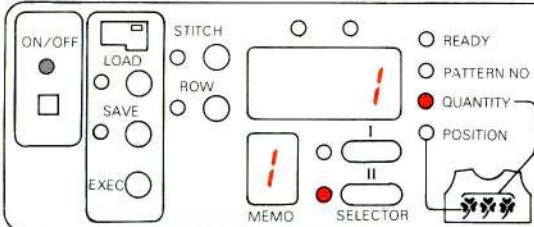


When the quantity lamp is lit, the computer wants to know how many pattern repeats there are in the first motif.



This indicates that you are programming the first motif.

② Enter 1.



Pattern repeats entered by you. This indicates that you are programming the first motif.

STEP 4

Enter the pattern position for first motif.

- 1 Push the step key.

STEP

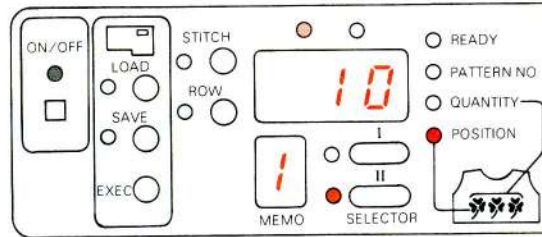
- 2 PATTERN A

- If you want to knit the pattern centered at 0, then proceed to step 5.

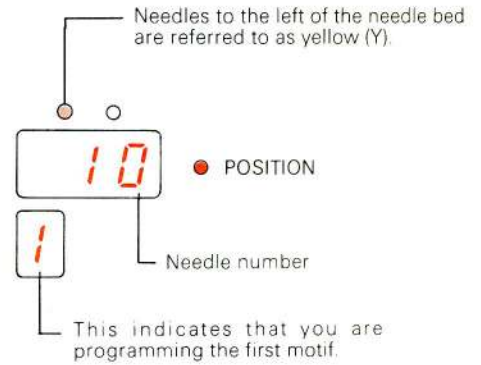
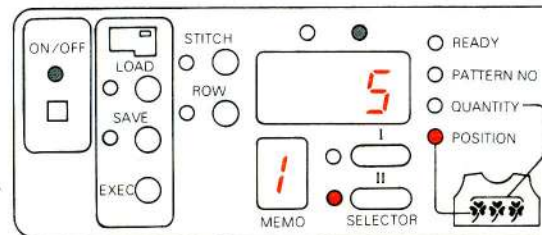
PATTERN B

- If you want to change the position of the pattern to the left or right of center 0, push the CE key to clear the display. Now enter the new left end needle position which in this example is green 5 (G5).

CE Green 5



The position lamp is lit. The yellow lamp and display indicate that yellow 10 (Y10) will be the left end needle for the first motif. (Pattern will be centered over 0 on the needle bed).



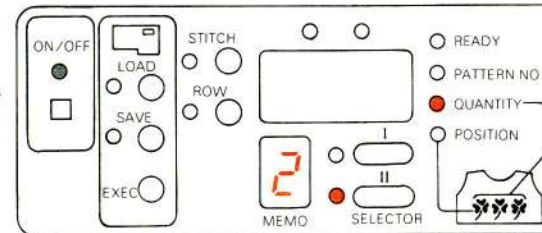
- When the position lamp is lit, you can change the position of the motif, and move it either to the left or to the right of center 0 on the needle bed.

STEP 5

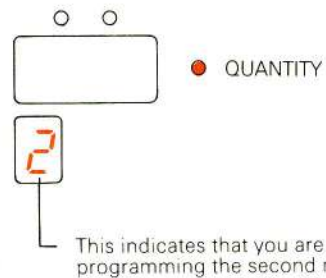
Now enter the number of pattern repeats in the second motif.

- 1 Push the step key.

STEP



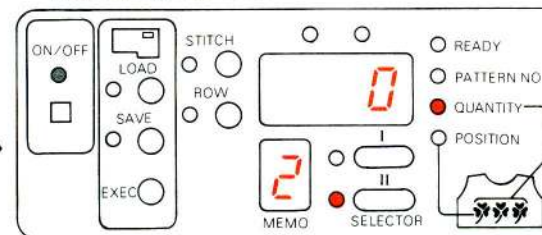
When the quantity lamp is lit, the computer wants to know how many pattern repeats there are in the second motif.



- The programming for selector II is finished when you enter 0 as the quantity of pattern repeats for the next motif.

- 2 Enter 0.

0

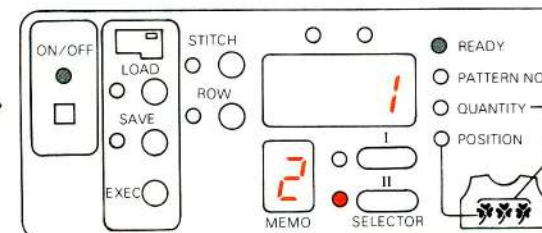


STEP 6

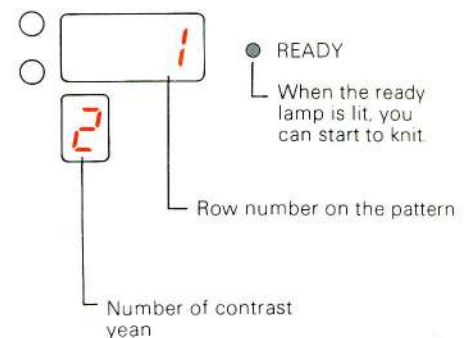
End of program

Push the step key.

STEP

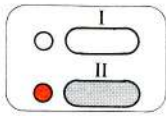


The ready lamp is lit, and you have completed the program. You are now ready to knit !.



- If you want to check what you have programmed in, you can do so by repeatedly pressing the step key. The program will be displayed step by step in the order in which you entered it. (See page 33.)

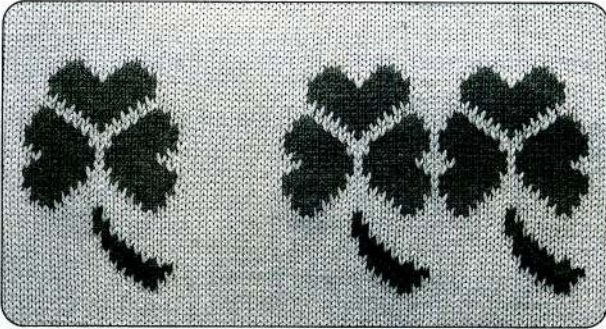
♣ To knit the pattern see page 65.



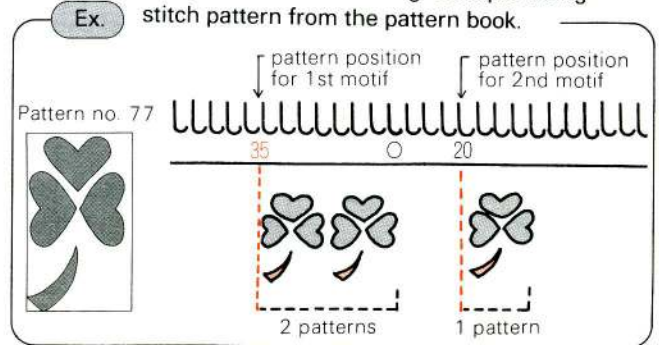
MOTIFS-TWO PATTERN REPEATS AS MOTIF 1 AND ONE PATTERN REPEAT AS MOTIF 2

<USE SELECTOR II>

■ Motif with multiple pattern repeats

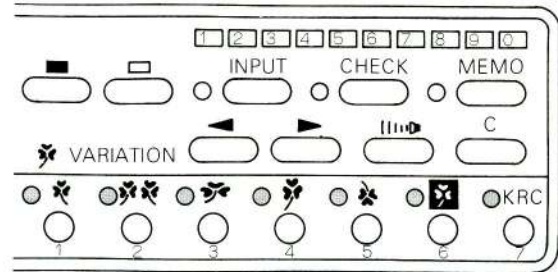


How to knit the following example using stitch pattern from the pattern book.



• Before entering your program

- Switch on the power.
When the power is turned on the ready lamp lights up.
Any information displayed on the panel relates to before the power was turned off.
- Ensure that all the variation lamps are out.
Should any of the variation lamps be lit, then can be turned off by pushing them.



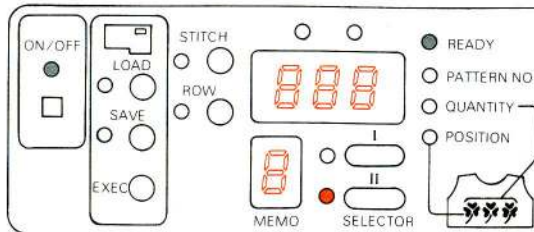
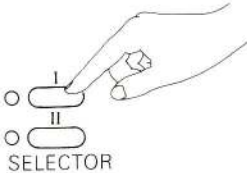
• PATTERN PROGRAM

INDICATION OF THE OPERATION PANEL

STEP 1

Choose the selector I or II.

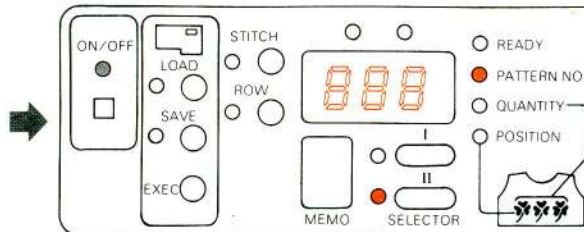
Push selector II.



STEP 2

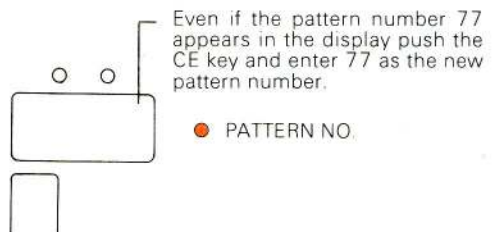
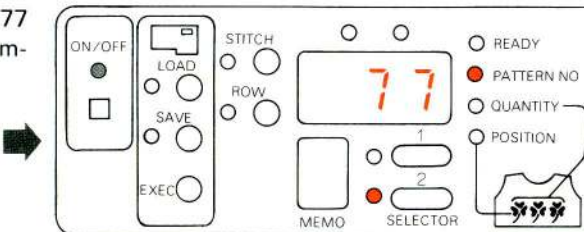
Select the pattern number which you are going to knit.

- Push the step key.



The pattern no. lamp is lit and the display shows the former pattern number.

- Push the CE key to clear the display and enter 77 as the new pattern number.



Even if the pattern number 77 appears in the display push the CE key and enter 77 as the new pattern number.

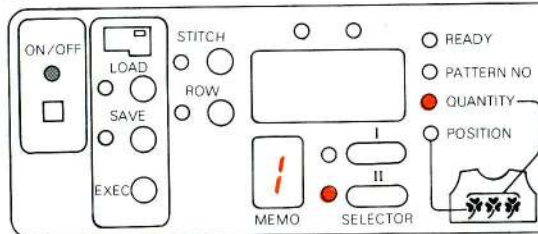
● PATTERN NO.

STEP 3

Enter the number of pattern repeats in the first motif.

- ① Push the step key.

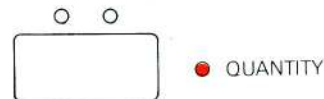
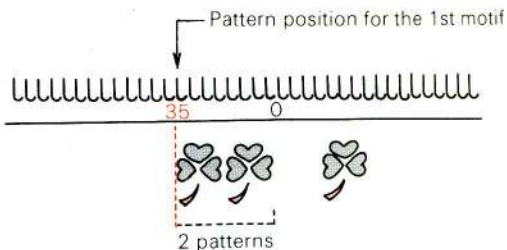
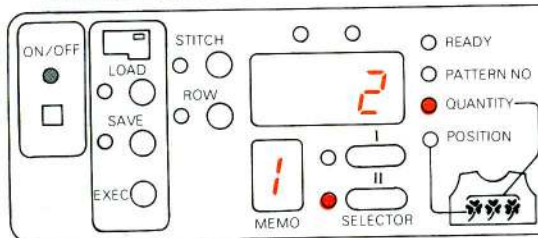
STEP



When the quantity lamp is lit, the computer wants to know how many pattern repeats there are in the first motif.

- ② Enter 2.

2



This indicates that you are programming the first motif.



Pattern repeats entered by you

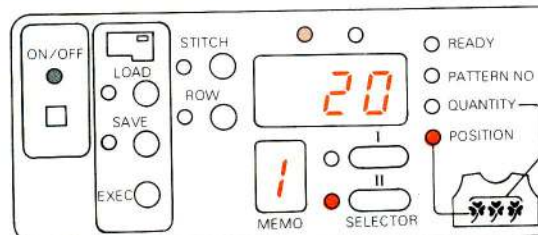
This indicates that you are programming the first motif.

STEP 4

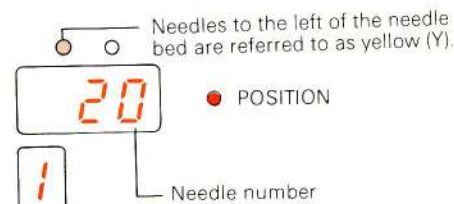
Enter the pattern position for first motif.

- ① Push the step key.

STEP



The position lamp is lit. The yellow lamp and display indicate that yellow 20 (Y20) will be the left end needle for the first motif. (Pattern will be centered over 0 on the needle bed.)



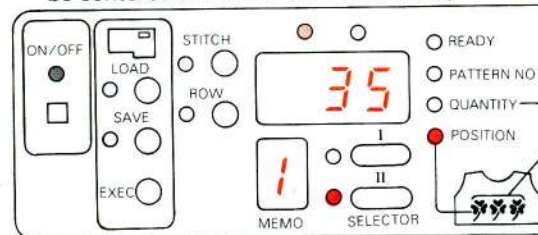
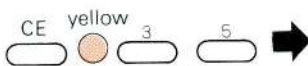
Needles to the left of the needle bed are referred to as yellow (Y).

POSITION

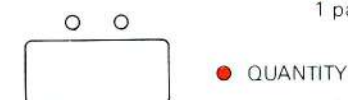
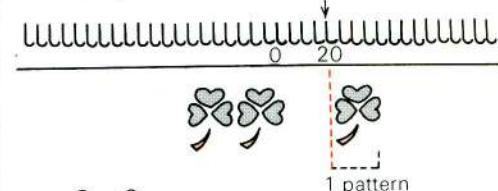
Needle number

This indicates that you are programming the first motif.

- ② Push the CE key to clear the display and enter yellow 35 (Y35) as the new left end needle position.



Pattern position for 2nd motif <green 20>



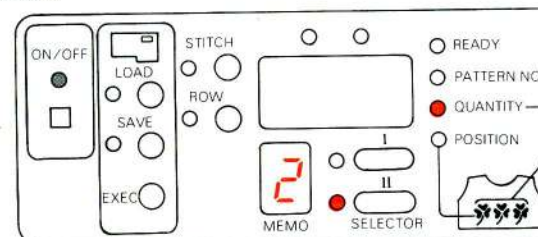
This indicates that you are programming the second motif.

STEP 5

Enter the number of pattern repeats in the second motif.

- ① Push the step key.

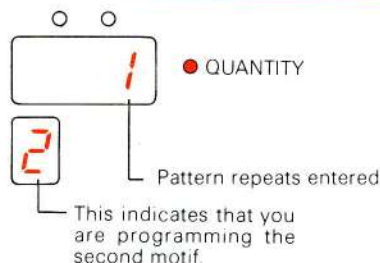
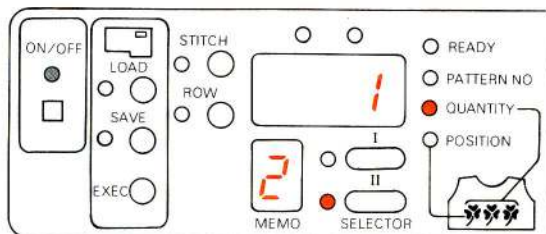
STEP



When the quantity lamp is lit, the computer wants to know how many pattern repeats there are in the second motif.

② Enter 1.

1

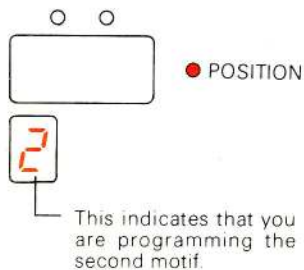
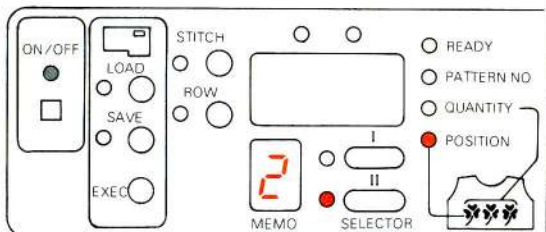


STEP 6

Enter the pattern position for second motif.

① Push the step key.

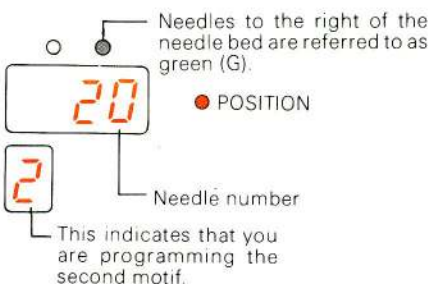
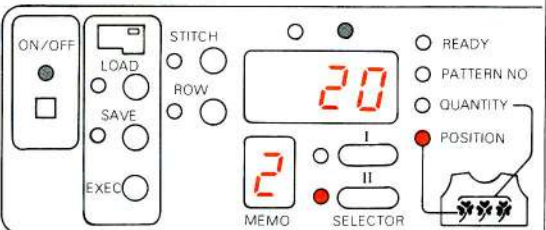
STEP



The position lamp is lit, and the yellow and green lamps flash on and off. The computer wants to know the position for the 2nd motif.

② Enter green 20 (G20) for the pattern position of the 2nd motif.

green 2 0

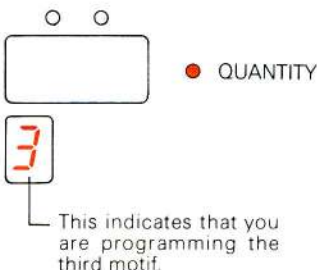
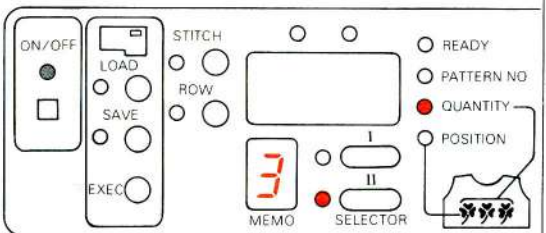


STEP 7

Enter the number of pattern repeats in the 3rd motif.

① Push the step key.

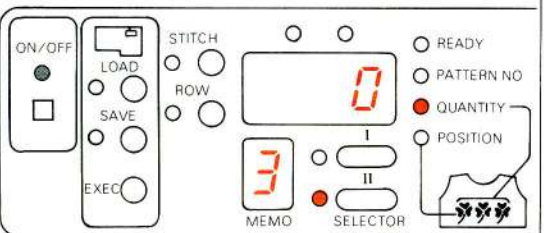
STEP



When the quantity lamp is lit, the computer wants to know how many pattern repeats there are in the third motif.

② Enter 0.

0



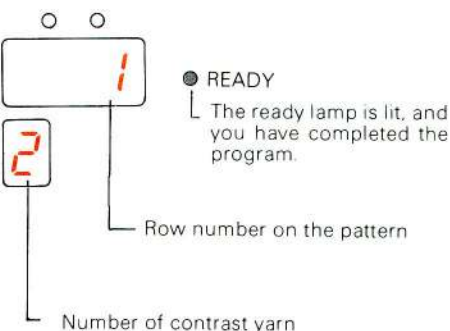
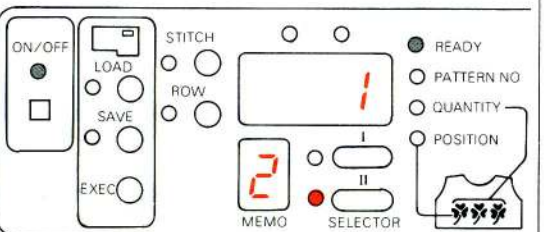
• The programming for selector II is finished when you enter 0 as the number of pattern repeats for the next motif.

STEP 8

Finish the programming.

Push the step key.

STEP



When the ready lamp is lit, you can start to knit.

- If you want to check what you have programmed in, you can do so by repeatedly pressing the step key. The program will be displayed step by step in the order in which you entered it. (See page 33.)

♣ To knit the pattern see page 65.

● HOW TO CHECK AND CORRECT YOUR PATTERN PROGRAM

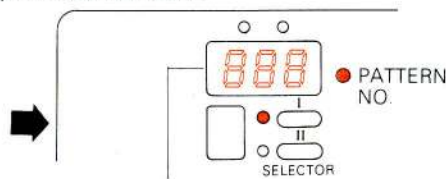
If you repeatedly push the step key, the program is displayed step by step in the order in which you entered it. In this way you can check and correct your program.

♣ If there is no pattern programmed into the computer, you cannot proceed on to the next stage even if you push the step key.

• How to check the pattern program for Selector I

- ① Make sure that all variation keys are set correctly.
- ② Choose selector I. The lamp of selector I is lit.
- ③ Push the step key.

STEP

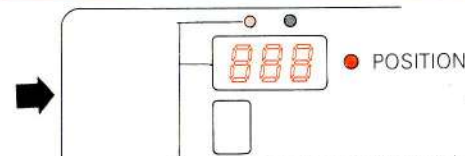



The display shows the memorised pattern number.

- How to correct (1) Push the CE key to clear the display. (If you push the step key again after pushing the CE key, the original number that has been memorised will appear in the display again).
- (2) Enter the correct number.

- ④ Push the step key.

STEP

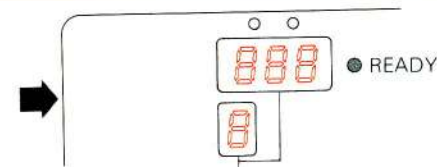



The display shows the position of the left end needle of the center pattern.

- How to correct (1) Push the CE key to clear the display. The yellow and green lamps are flashing on and off. (If you push the step key again after pushing the CE key, the original number that has been memorised will appear in the display again).
- (2) Push the yellow or green key and enter the correct number for the pattern position.

- ⑤ Push the step key.

STEP

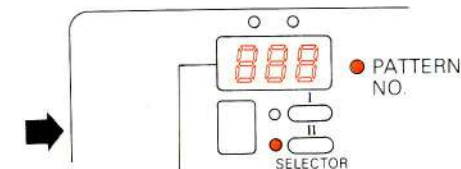



The ready lamp is lit.

• How to check the pattern program for Selector II

- ① Make sure that all variation keys are set correctly.
- ② Choose selector II. The lamp of selector II is lit.
- ③ Push the step key.

STEP

The display shows the memorised pattern number.

- How to correct (1) Push the CE key to clear the display. (If you push the step key again after pushing the CE key, the original number that has been memorised will appear in the display again).
- (2) Enter the correct number.

INDICATION OF THE OPERATION PANEL

- When you are correcting the pattern number or entering the same pattern number again, the position of the pattern repeat is automatically placed over the center of the needle bed.

- ♣ When you correct the pattern number with the selector at I, the number is also corrected on selector II and the program erased automatically from the computer.

Even if you decide to alter memo information for patterns from the pattern book, it will appear again in its original form when you correct the pattern number or enter that number again.

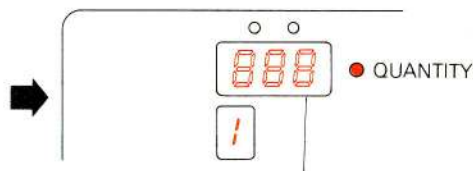
- When you are correcting the pattern number or entering the same pattern number again, the row number in the display goes back to the first row of the pattern.

- When you correct the pattern number or enter the same pattern number again, the program previously entered for selector II is erased from the computer.

- ♣ At the same time, the pattern number is also corrected on selector I and the position of the pattern repeat is automatically placed over the center of the needle bed.

Even if you decide to alter memo information for patterns from the pattern book, it will appear again in its original form when you correct the pattern number or enter that number again.

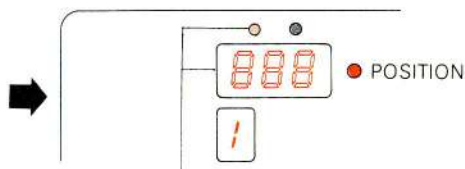
④ Push the step key.



The display shows the number of patterns for the 1st motif.

- How to correct (1) Push the CE key to clear the display. (If you push the step key again after pushing the CE key, the original number that has been memorised will appear in the display again.)
(2) Enter the correct number.

⑤ Push the step key.

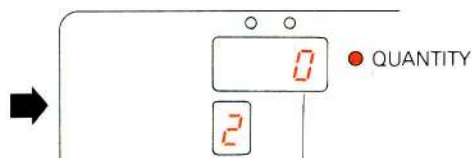


Pattern position for 1st motif.

- How to correct (1) Push the CE key to clear the display. The yellow and green lamps are flashing on and off. (If you push the step key again after pushing the CE key, the original number that has been memorised will appear in the display again.)
(2) Push the yellow or green key and enter the correct number for the pattern position.

♣ For the 2nd to 6th motifs, repeat steps ④ – ⑤ .

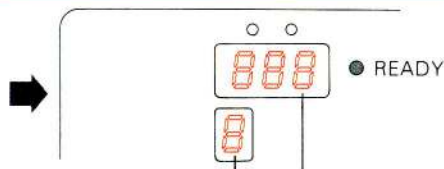
⑥ Push the step key.



You don't need the 2nd motif.

- How to correct (1) Push the CE key to clear the display. (If you push the step key again after pushing the CE key, the original number that has been memorised will appear in the display again.)
(2) Enter the correct number.

⑦ Push the step key.



The ready lamp is lit.

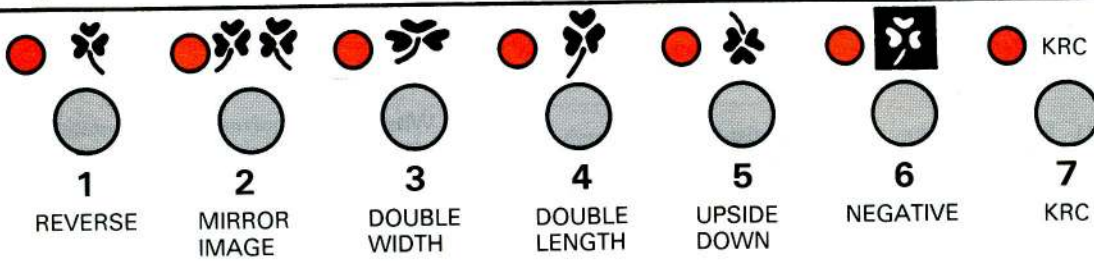
- When you are correcting the number of patterns for the 1st motif, the pattern position (first end needle) will automatically place the 1st motif over the center of the needle bed. The display will show the new pattern position. The pattern position of motifs 2 to 6 will not change even if you correct the number of patterns.

- Push the step key and go on to the pattern position for the motif for which you have just entered the new number of patterns.

- When you are correcting the pattern number or entering the same pattern number again, the row number in the display goes back to the first row of the pattern.

HOW TO USE THE VARIATION KEYS

VARIATION

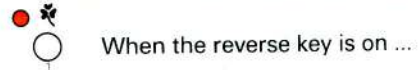
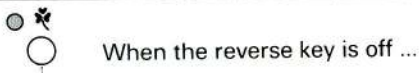


- You can have fun making lots of different pattern combinations with the variation keys.
- They are set when the ready lamp is lit.
- The variation lamp will be lit when the key is operative. The pattern is then varied according to whichever keys you have pushed.

1 REVERSE KEY

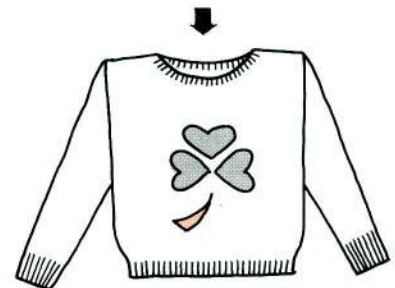
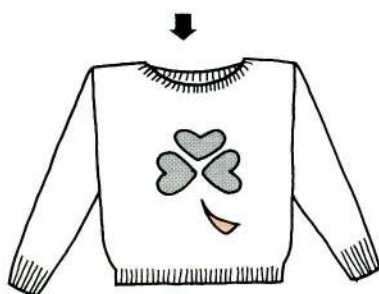
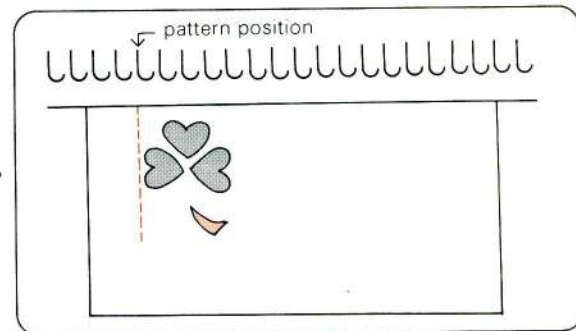
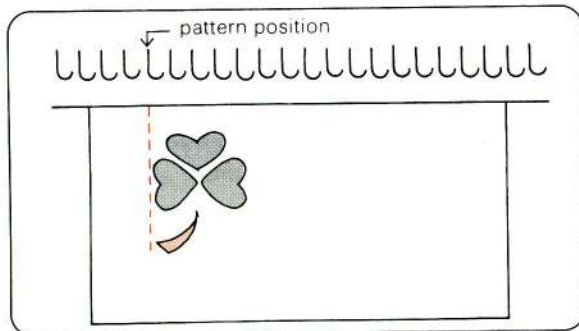
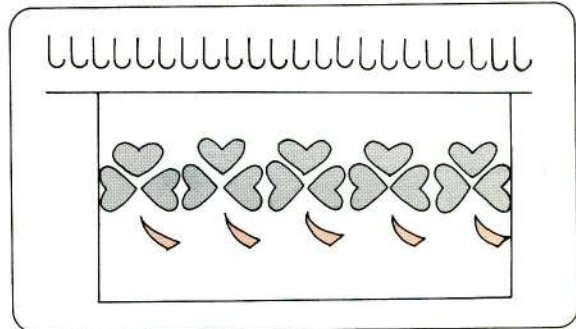
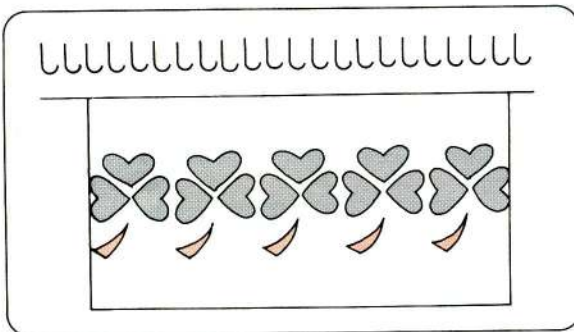


The direction of the pattern is changed.



- The pattern made on your knitting (as seen from the purl side) is in the same direction as the diagram in the pattern book.

- The pattern made on your knitting (as seen from the purl side) is in the opposite direction to the diagram in the pattern book.



Remember: The pattern direction is different when you view it from the plain side and from the purl side.

② MIRROR IMAGE KEY



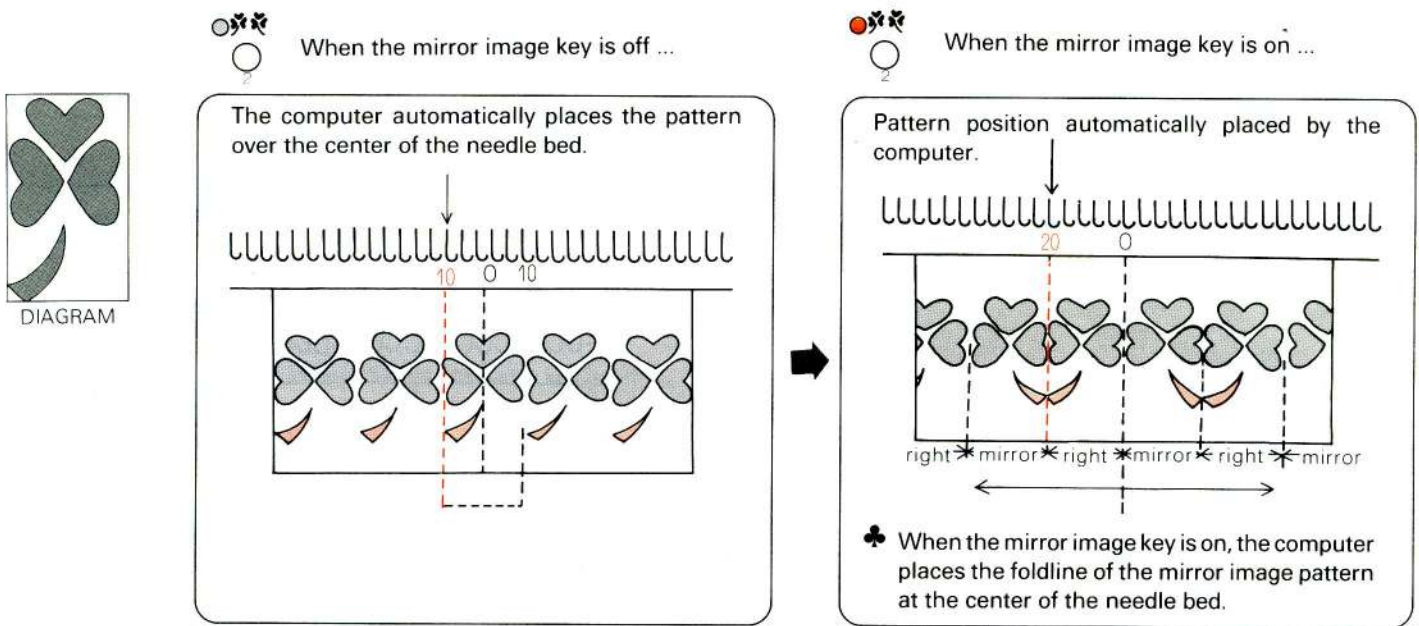
The pattern is knitted with a mirror image.

When the pattern faces in the same direction as the diagram, it is the right way round.

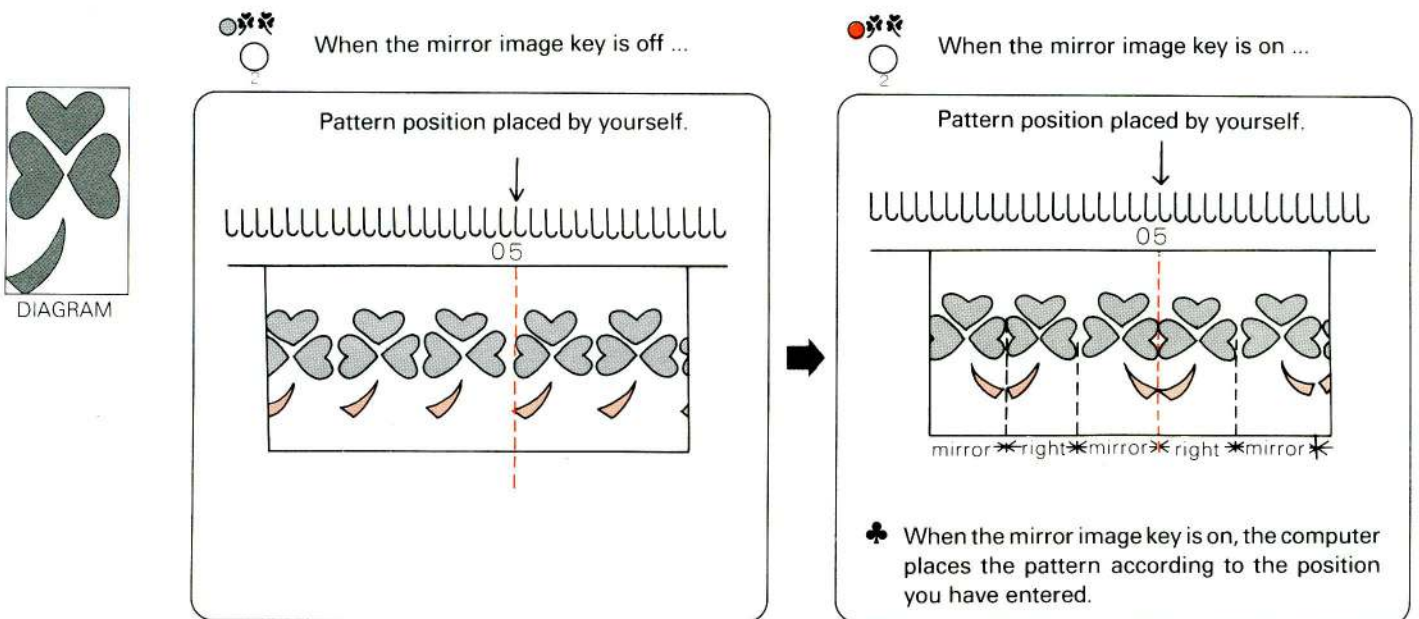
When the pattern faces in the opposite direction to the diagram, it is the reverse way round.

Pattern using selector I

- When using the pattern position which is placed automatically by the computer ...



- When using a pattern position placed by yourself ...

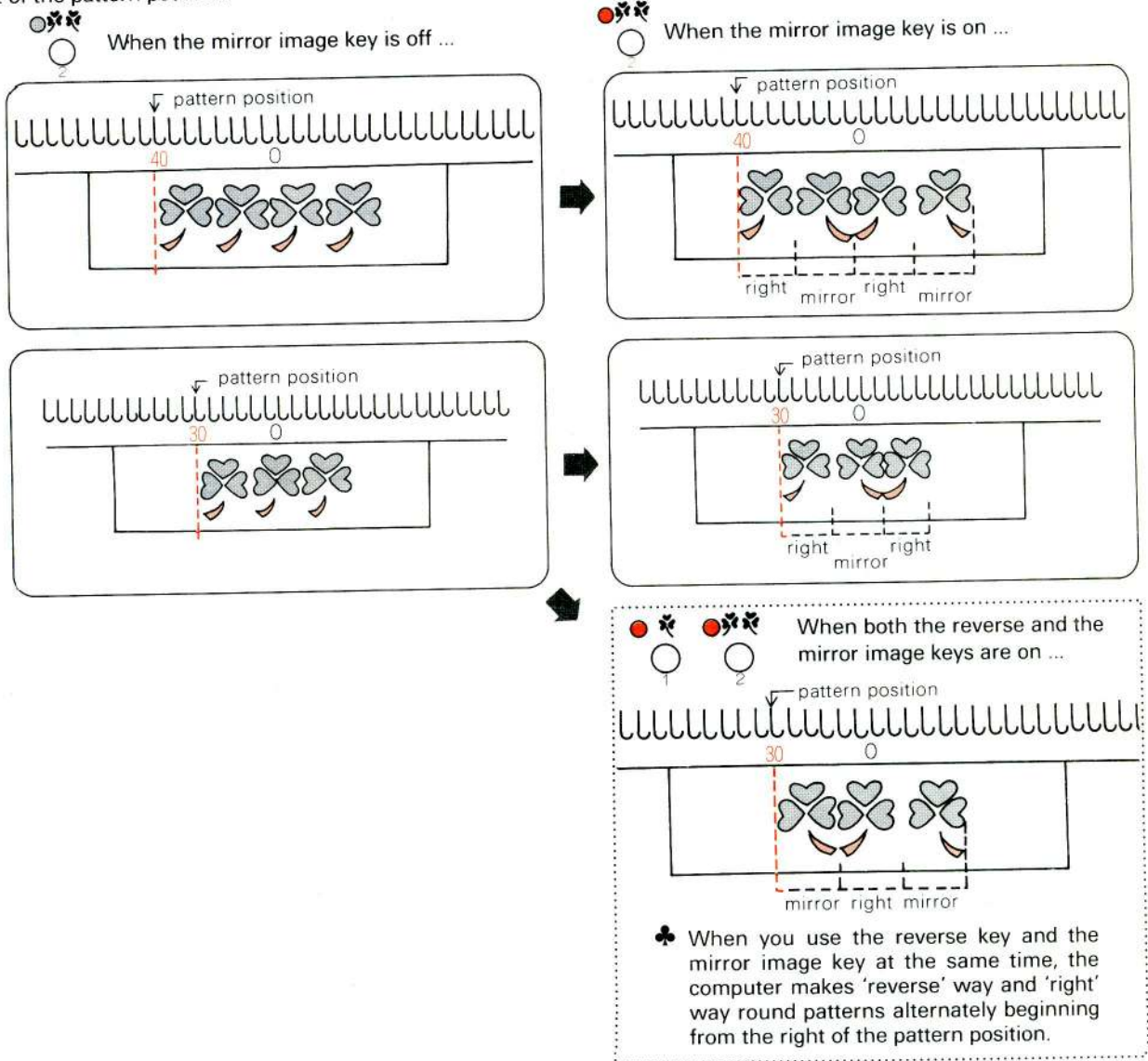


Pattern using selector II.

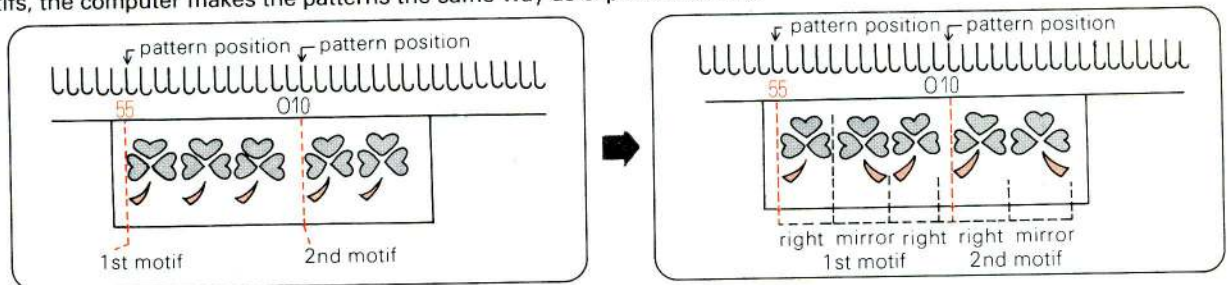
- When you use the mirror image key, the computer makes patterns alternately the "right" way and "reverse" way round, beginning from the right of the pattern position.



DIAGRAM



- For 2 to 6 motifs, the computer makes the patterns the same way as explained above.



③ DOUBLE WIDTH KEY



The pattern is knitted in double width.

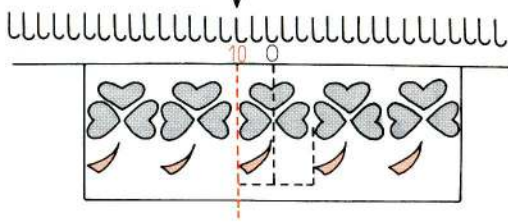
Pattern using selector I

- When using the pattern position which is placed automatically by the computer ...



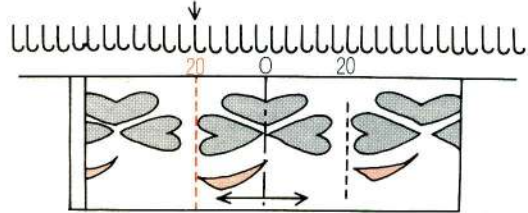
When the double width key is off ...

The computer automatically places the pattern over the center of the needle bed.



When the double width key is on ...

Pattern position automatically placed by the computer.



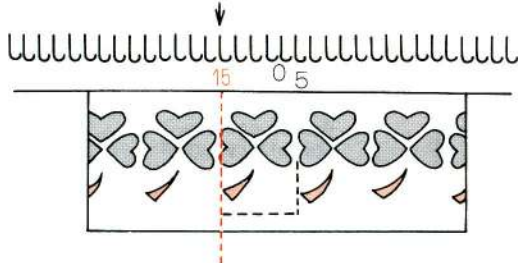
- The center of the pattern is placed at the center of the needle bed.

- When using a pattern position placed by yourself ...



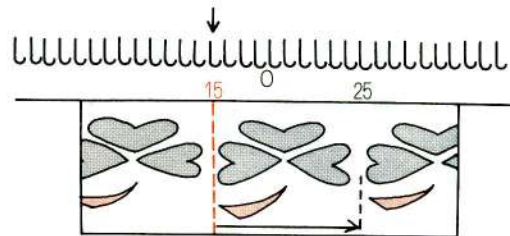
When the double width key is off ...

Pattern position placed by yourself.



When the double width key is on ...

Pattern position placed by yourself.



- The double width pattern is placed to the right of your selected position.

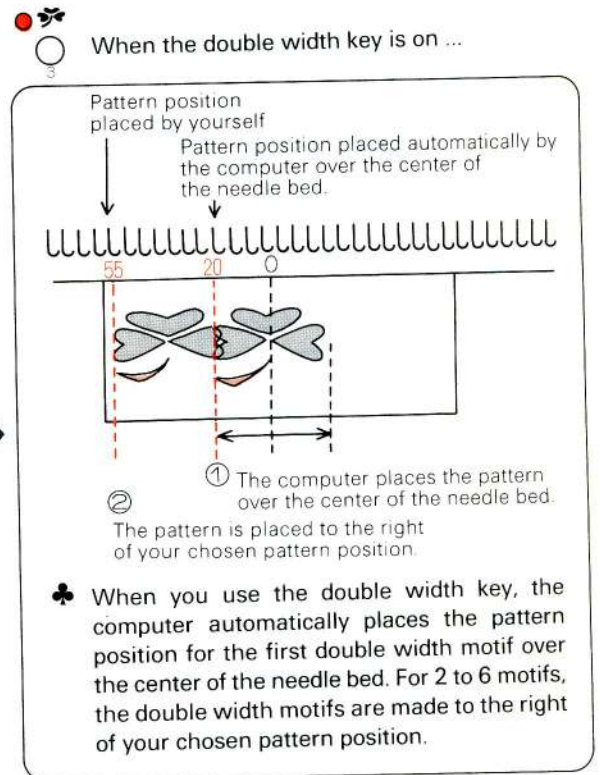
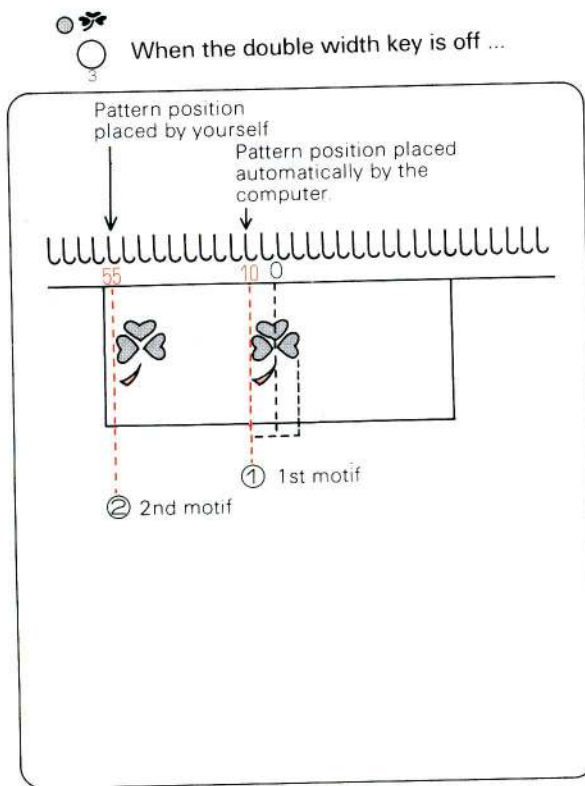
Pattern using selector II

The example uses 2 motifs.

- When using the pattern position for the first motif which is placed automatically by the computer ...



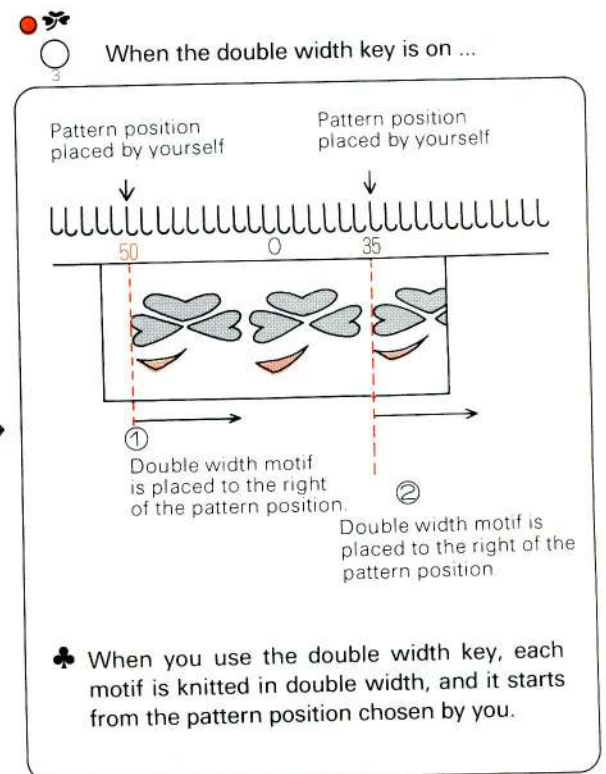
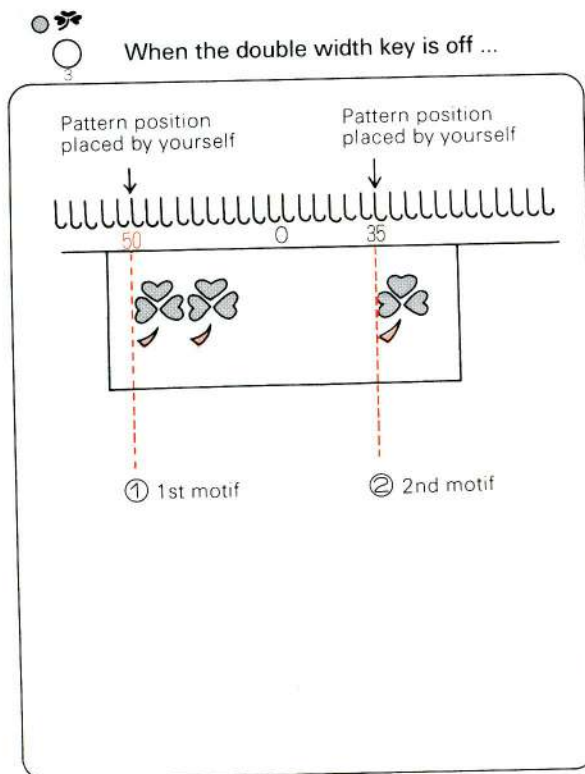
DIAGRAM



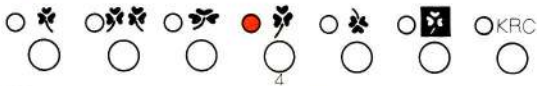
- When using a pattern position placed by yourself ...



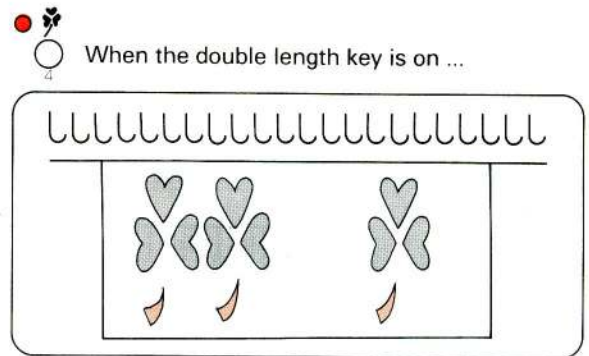
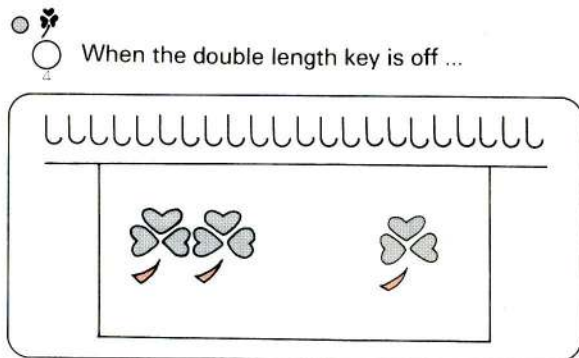
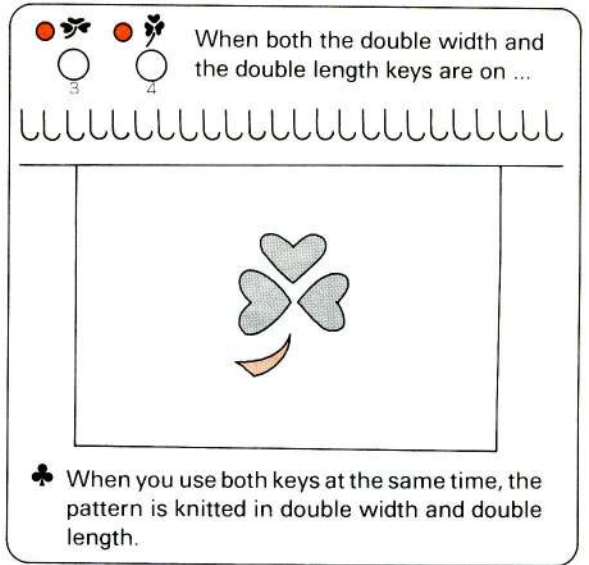
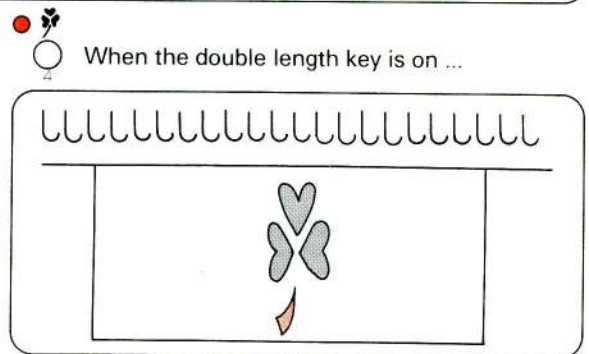
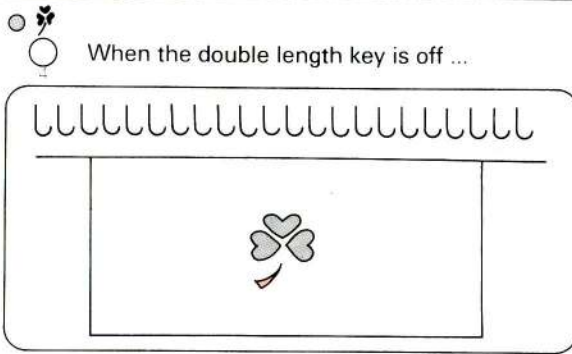
DIAGRAM



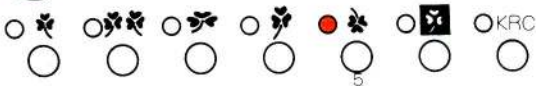
4 DOUBLE LENGTH KEY



The pattern is knitted in double length.



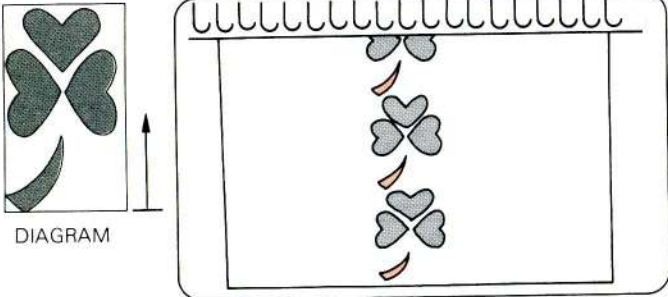
5 UPSIDE DOWN KEY



The pattern is knitted upside down.

When the upside down key is off ...

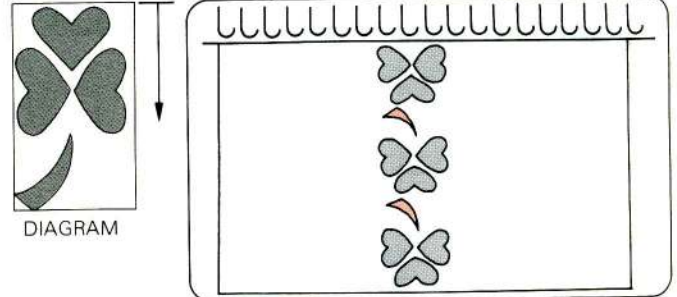
The pattern starts at the first row (bottom row) of the pattern.



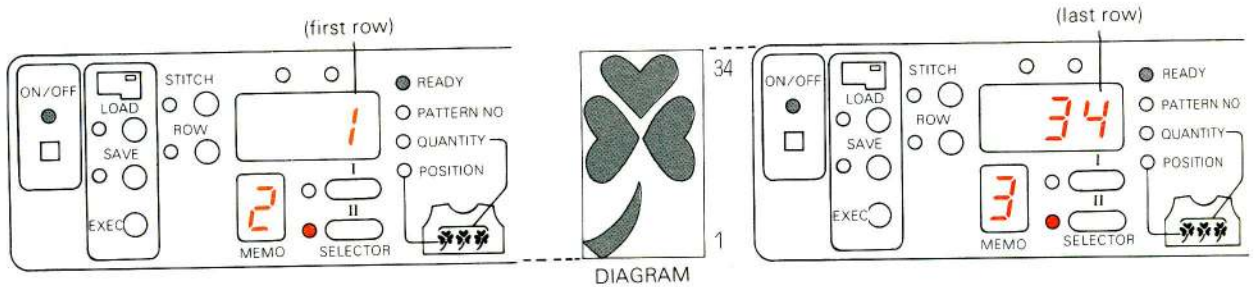
The display shows 1 as the first row of knitting after you have finished pattern programming.

When the upside down key is on ...

The pattern starts at the last row (top row) of the pattern.



The display shows 34 as the first row of knitting after you have finished pattern programming.



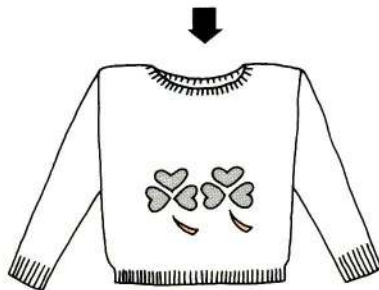
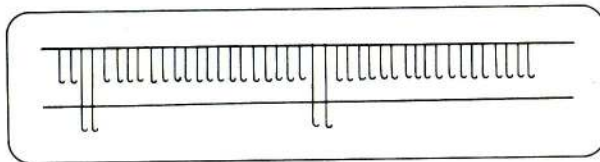
6 NEGATIVE KEY



The pattern is knitted in negative.

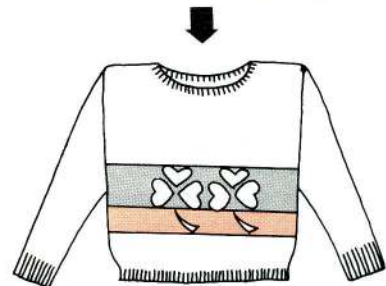
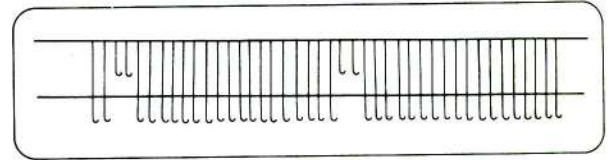
When the negative key is off ...

Needles corresponding to the black squares (■) in the diagrams in the pattern book are selected to D position, and the other needles remain in B position.



When the negative key is on ...


Needles corresponding to the black squares (■) in the diagrams in the pattern book remain at B position and the other needles are selected to D position.

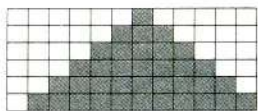


7 KRC KEY




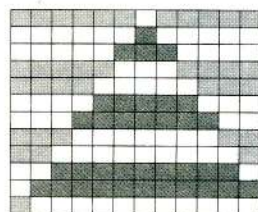
Fairisle rib pattern is worked using both the ribber and the double bed colour changer (KRC).

 When the KRC key is off ...



(Chart for single bed fairisle pattern)

 When the KRC key is on ...

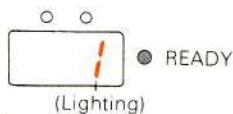
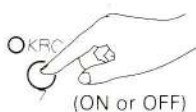


(Chart for fairisle rib pattern)

 ... C-knitted with contrast yarn
 ... M-knitted with main yarn

- In fairisle rib pattern, the main yarn and contrast yarn are knitted separately. 4 rows of knitting makes 2 rows of pattern.

- When you put the KRC key on or off, the display shows 1 and the needles are selected according to the first row of knitting.



- When the upside down key is on, the display shows the last row number of the pattern, and the needles are selected according to the last row.

- When you use the double bed colour changer (KRC)

Please read the original instruction manual for the KRC in conjunction with the following instructions.

• Pattern

- All the patterns shown in the KRC instruction manual are also memorised in the computer, so you should select the pattern you require from the pattern book. (The punchcards that come with the KRC are not used.)
- You can knit fairisle rib pattern using the pattern number of fairisle and single motif patterns built in the computer with KRC key on.

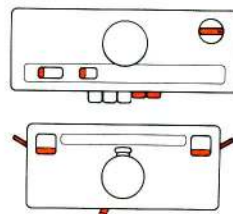
• Pattern Program

- Push the KRC key and check the lamp is lit.
- You can use another variation key at the same time as the KRC key if you wish.
- You can use the KRC key to make single motifs in conjunction with selector II. (Please disregard the instruction on page 17 of the KRC instruction manual).

• Pattern Knitting

- 1 Refer to your KRC instruction manual and set up the ribber and KRC onto your machine.
- 2 Refer to your KRC instruction manual and thread up main and contrast yarns.
Button 1 — main yarn, 2/3/4 — contrast yarns.
- 3 Fit the knitting bar on the main bed.
- 4 Set the end needle selection mechanism to OFF (See page 12).
- 5 Arrange the needles for full needle rib and knit 10 rows with the main yarn in full needle rib. Place the K carriage outside the lefthand turn mark.
- 6 Program the pattern.
- 7 Set the change knob to KC.
- 8 Move the K carriage across the needle bed from left to right using the main yarn, so that the needles have been selected.

- 9 Set the K carriage and the KR carriage as shown in the illustration.



- 10 Move the carriages to the left until you hear a "Click". Now push the changer button according to the number shown in the memo display.
- 11 Knit two rows.
- 12 Continue knitting. When the carriages are at the lefthand side, push the changer button according to the number shown in the memo display.

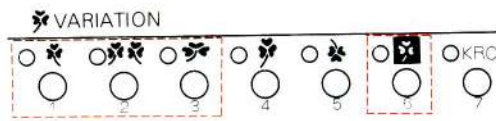
- Push the changer button after you hear the "Click".
- ◆ For correction of mistake, refer to page 90.

● HOW TO CHANGE A VARIATION KEY WHILE YOU ARE KNITTING IN PATTERN

- The variation keys can be changed whenever you wish, even if you are in the middle of a pattern.

How to change the reverse, double width, mirror image or negative keys.

1



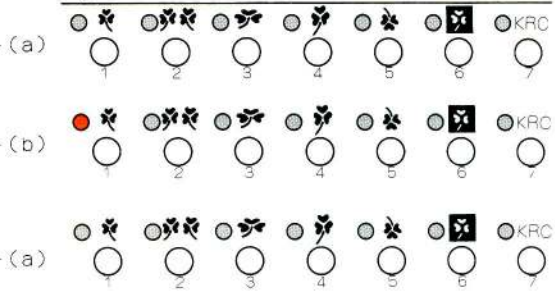
- Change the variation key one row before you want the pattern to be altered.
- Change the program in this way anywhere on the pattern to create different effects.

Ex. Change the reverse key for each pattern as follows:—

- This example was knitted using the pattern book fairisle pattern no. 18.

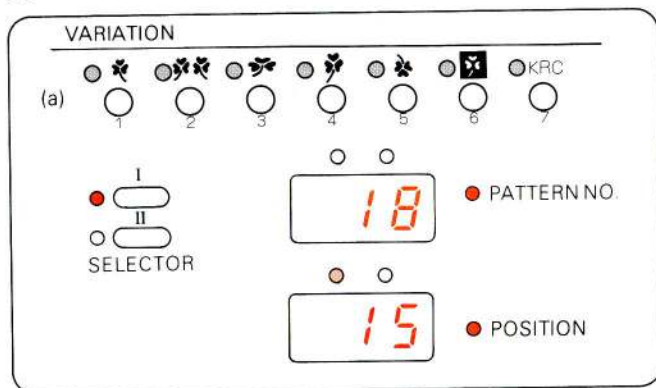


VARIATION

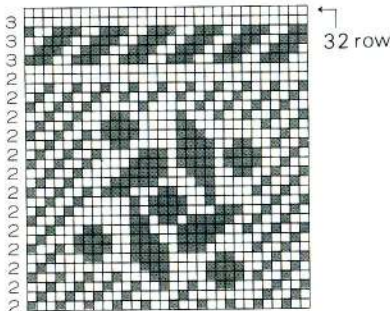


- How to knit.

① Program pattern (a) as follows:



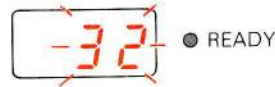
② Look at the diagram for the pattern in the pattern book, and make a note of the number of the row before that on which you want to change the pattern.



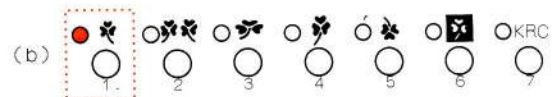
- In our example, the pattern would be changed on row 1 (i.e. the first row of the next pattern repeat), so one row before the final pattern row would be row 32.

- You can use the memo display to memorize the row number for the change. Use the memo program to indicate the 32nd row in the memo display. (Refer to page 46.)

③ Knit pattern (a) in fairisle. You can continue knitting until the memorized number (Row 32) flashes on and off in the display.



④ Now change the variation key (or the pattern program).

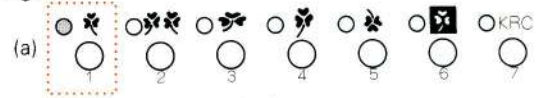


(Turn on the reverse key)

⑤ When you operate the K carriage for the next row, the needles are selected for the first row of pattern (b). Continue to knit until the memorized number (Row 32) flashes on and off again in the display.



⑥ Now change the variation key (or the pattern program) again.

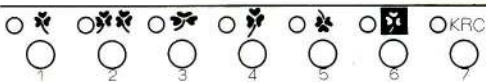


(Turn off the reverse key)

⑦ When you operate the K carriage for the next row, the needles are selected for the first row of pattern (a).

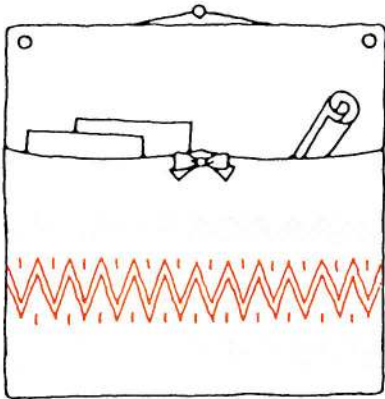
How to change the double length key.

VARIATION



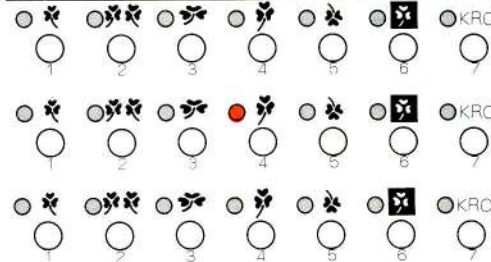
- Change the variation key on the row you want the pattern to be altered.

Ex. Change the double length key in the middle of the pattern as follows:



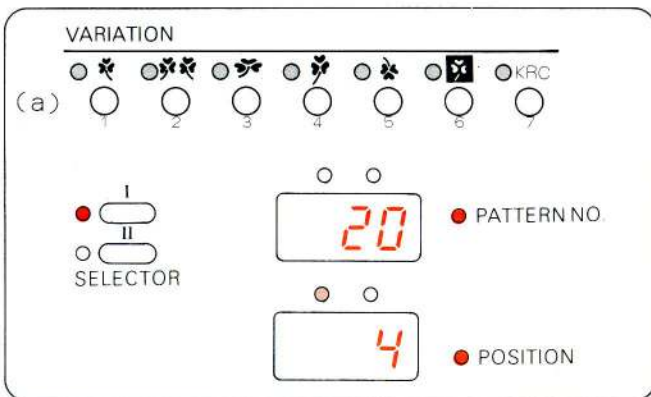
- This example was knitted using the pattern book fairisle pattern no. 20.

VARIATION

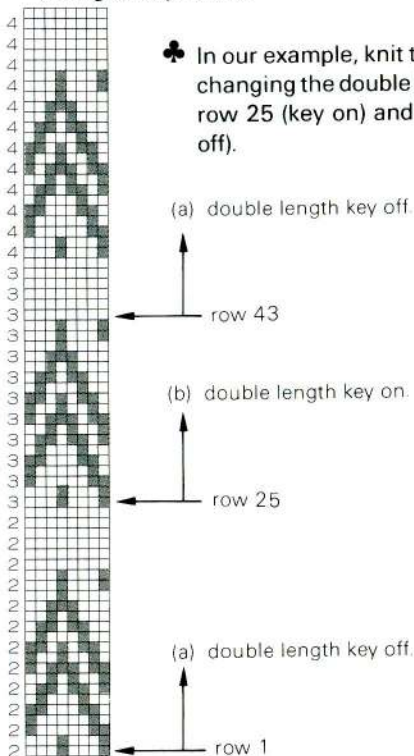


How to knit.

- Program pattern (a) as follows:—



- Look at the diagram for the pattern in the pattern book and make a note of the number of the row on which you want to change the pattern.

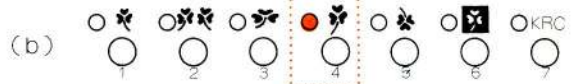


♣ In our example, knit the design by changing the double length key at row 25 (key on) and row 43 (key off).

- Knit pattern (a) in fairisle. Continue knitting until the memorized number (row 25) flashes on and off in the display.



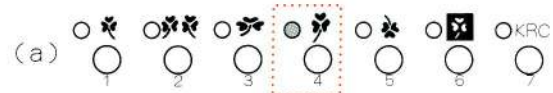
- Turn on the double length key. The pattern is changed to the new setting (b) on the row where the needles have already been selected. You can begin knitting pattern (b).



- Operate the K carriage. Continue knitting until row number (row 43) flashes on and off in the display.



- Turn off the double length key. The pattern is changed to the new setting (a) on the row where the needles have already been selected. You can begin knitting pattern (a).



- Operate the K carriage and knit pattern (a).

● LIST OF VARIATION KEYS

Use the appropriate variation key to knit the patterns marked "○" in the columns below.

	1	2	3	4	5	6	7
	REVERSE	MIRROR IMAGE	DOUBLE WIDTH	DOUBLE LENGTH	UPSIDE DOWN	NEGATIVE	KRC
FAIRISLE PATTERN	○	○	○	○	○	○	—
TUCK STITCH PATTERN	○	△ ^{*1}	—	△ ^{*2}	○	△ ^{*3}	—
SKIP STITCH PATTERN	○	○	○	○	○	△ ^{*3}	—
WEAVING PATTERN	○	△ ^{*4}	△ ^{*4}	○	○	○	—
THREAD LACE PATTERN	○	△ ^{*5}	△ ^{*5}	○	○	—	—
PLATED TUCK STITCH PATTERN	○	△ ^{*1}	—	—	○	△ ^{*3}	—
FAIRISLE RIB	○	○	○	○	○	○	○ ^{*6}

*1 — Don't use the mirror image key for a pattern which has more than 2 tuck stitches at the point where the patterns join. (See page 55 tuck stitch patterns).

*2 — Use the double length key according to the remarks on page 55 under tuck stitch patterns.

*3 — You knit tuck stitch, plated tuck stitch and skip stitch patterns from the pattern book without using the negative key.

*4 — Don't use the mirror image key or the double width key for patterns which have more than 4 selected needles at the point where the patterns join. (See page 55 under weaving pattern).

*5 — Don't use the mirror image key or the double width key for patterns which have more than 3 selected needles at the point where the patterns join. (See page 55 under thread lace pattern).

*6 — Always use the KRC key when you knit fairisle rib.

MEMO PROGRAM

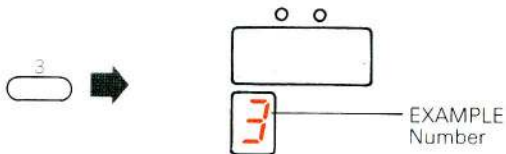


You can program the memo with information for pattern knitting, and this will be shown in the memo display while you knit.

- You can also easily enter, delete and modify the memo information.
- Use the keys 1 — 9 and the yellow and green keys.

INDICATION IN THE MEMO DISPLAY USING THE KEYS

- When you enter pattern knitting information using the keys 1 — 9.



- When you enter pattern knitting information using the yellow or the green key.



- Memo information for the pattern in the pattern book that you have modified or deleted will revert back to their original form when you enter the same pattern number again.
- Memo information of your original pattern will remain until you modify or delete them.

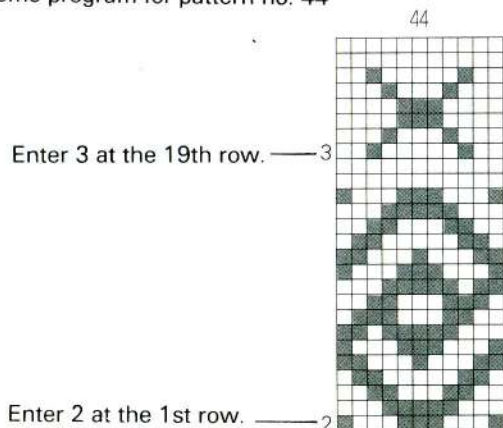
● HOW TO PROGRAM THE “MEMO PROGRAM”.

① ENTERING THE MEMO INFORMATION

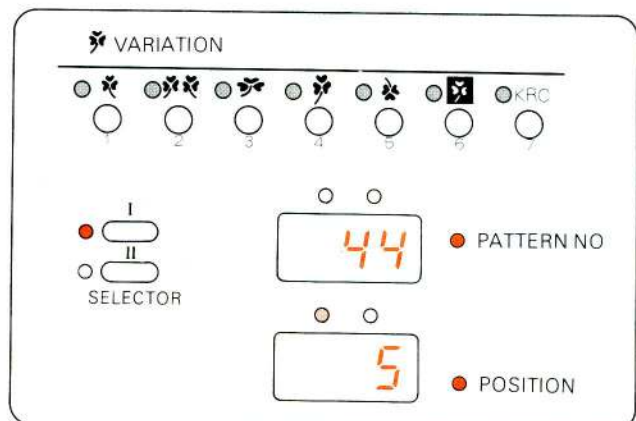
- You can enter extra information or modify the information already entered for a programmed pattern.
- Advance the row number in the display until you reach the row for which you want to enter or modify information. Do this by pushing either the up or down key, and then enter the new information.

Ex.

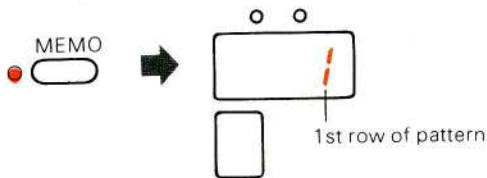
Memo program for pattern no. 44



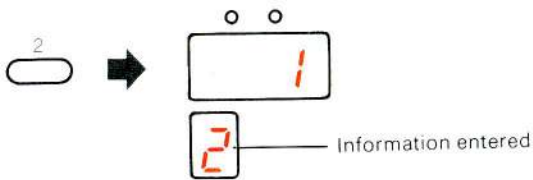
- ① Program the pattern. (The following example is worked with the selector on I.)



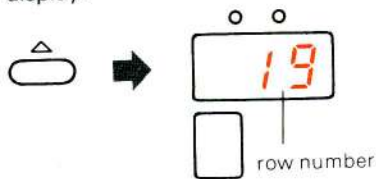
- ② When the ready lamp is lit, push the memo key. (The ready lamp goes off.)



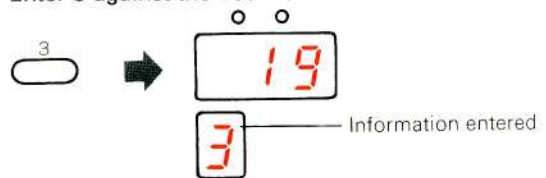
- ③ Enter 2 against the first row.



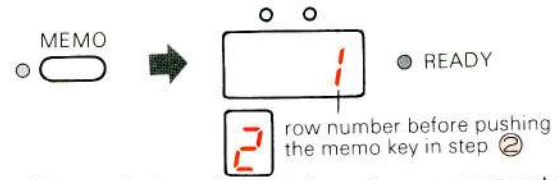
- ④ Push the up key until the figure 19 appears in the display.



- ⑤ Enter 3 against the 19th row.



- ⑥ Push the memo key to finish the memo program.



The ready lamp is lit and you have now completed the memo program.

- ♣ The display shows the first row of your pattern, and the information you have entered "2" appears in the memo display.

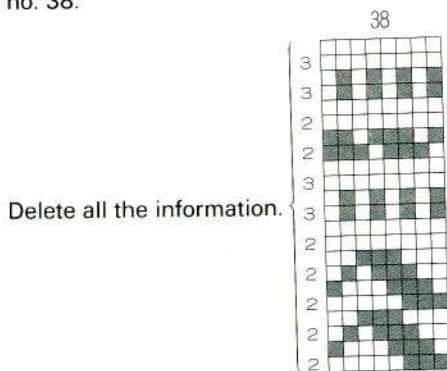
- While you are programming:
If you should push any of the keys, 1—9 the yellow or the green key by mistake, or you want to correct the memorized information, push the CE key to clear the memo display, and enter the correct figure.

② DELETING THE MEMO INFORMATION

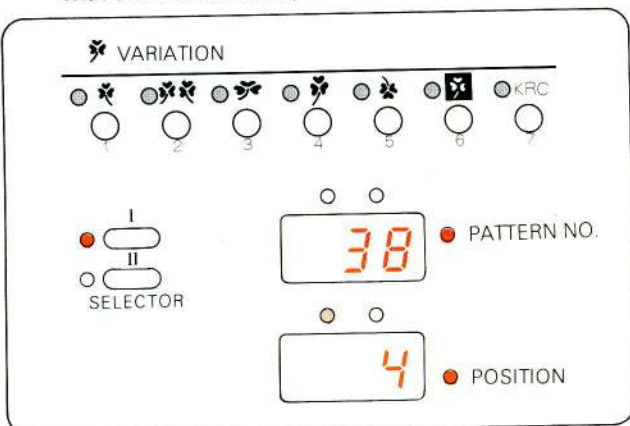
- How to clear the memo information for patterns that have been memorised.

Ex.

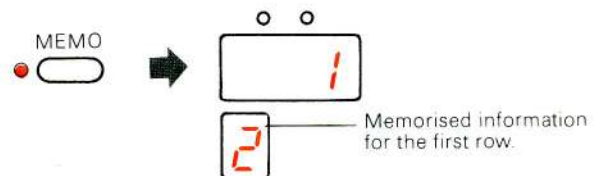
Delete the memo information for pattern no. 38.



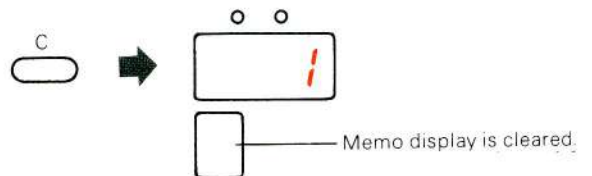
- ① Program the pattern. (The following example is worked with the selector on I.)



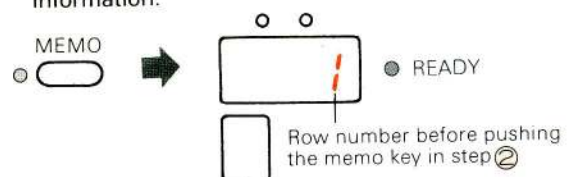
- ② When the ready lamp is lit, push the memo key. (The ready lamp goes off.)



- ③ Push the C key. (Memo information is deleted from the computer.)



- ④ Push the memo key to finish deleting the memo information.

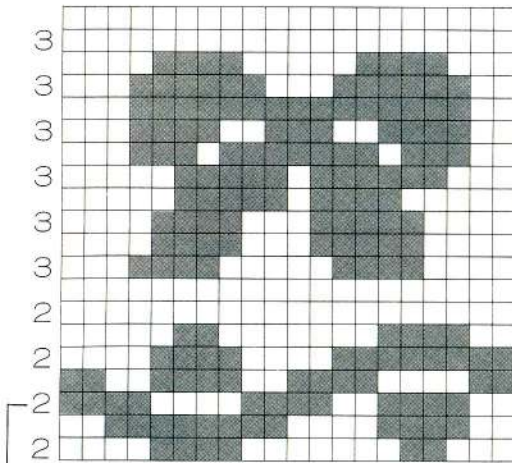


- ♣ The ready lamp is lit and the program is completed.

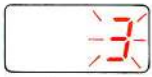
MEMO INFORMATION THE PATTERNS IN THE PATTERN BOOK

- Please refer to the diagrams on the back pages of your pattern book.
- The memo information is shown on the left side of the diagrams and it also appears in the memo display.

memo information



- When knitting the 3rd row of the pattern.

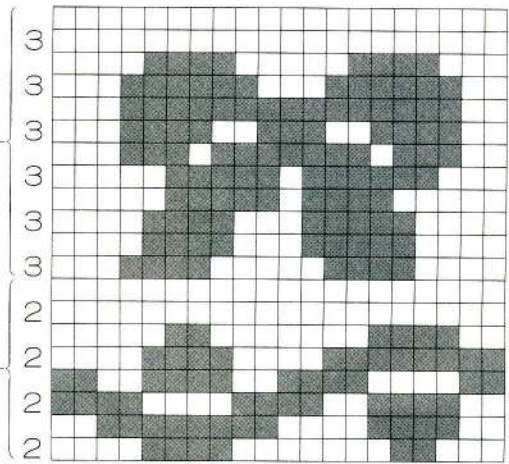


- The meaning of the memo information will be different depending on the type of pattern you are knitting.

FAIRISLE PATTERN

- The memo information is used to distinguish between the contrast yarns.
- No. 1 is used for the main yarn and the other numbers for the contrast yarns.

14



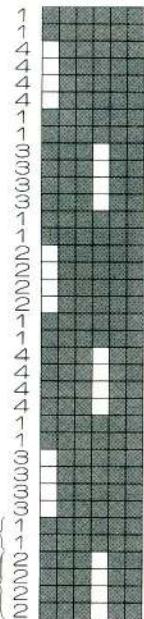
Knit with contrast yarn no. 2.

Knit with contrast yarn no. 3.

TUCK & SKIP STITCH PATTERN

- The memo information is used to distinguish between different colour yarns in multi-colour pattern knitting.

133



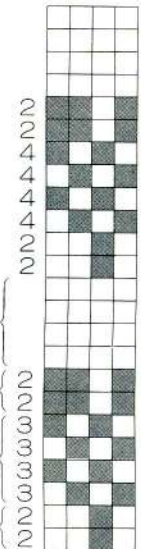
- Knit with yarn no. 1.

- Knit with yarn no. 2.

WEAVING PATTERN

- The memo information is used to distinguish between the weaving yarns.
- When no number is shown in the memo display, you should knit this row without a weaving yarn.

262



- Knit without a weaving yarn.

- Knit with weaving yarn no. 2.

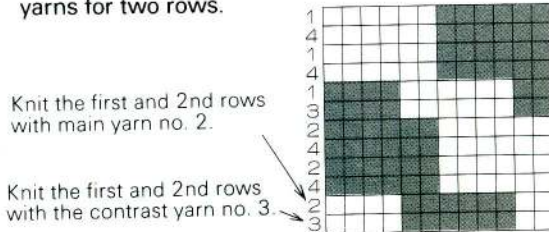
- Knit with weaving yarn no. 3.

- Knit with weaving yarn no. 2.

FAIRISLE RIB

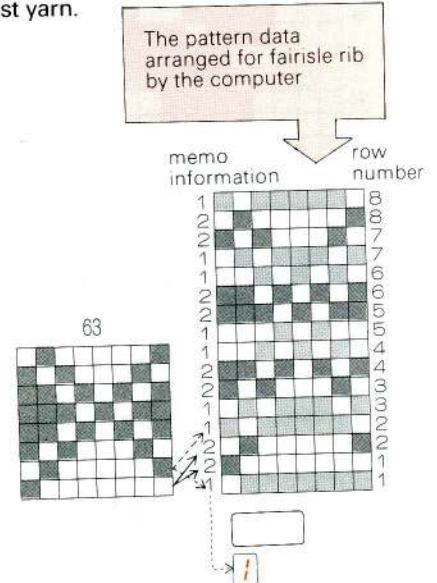
- For fairisle pattern the memo information is used as follows: —

- Memo information on odd numbered rows — distinguishes between different coloured contrast yarns for two rows.
- Memo information on even numbered rows — distinguishes between different coloured main yarns for two rows.



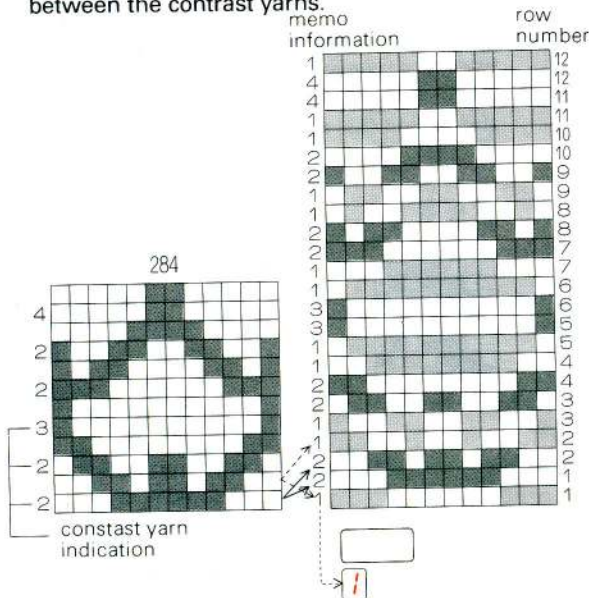
- ① When there is no memo information on the pattern data: —

- Knit with only one main yarn and one contrast yarn.
- The number 1 in the memo display tells you to knit with the main yarn, and the number 2 tells you to knit with the contrast yarn.



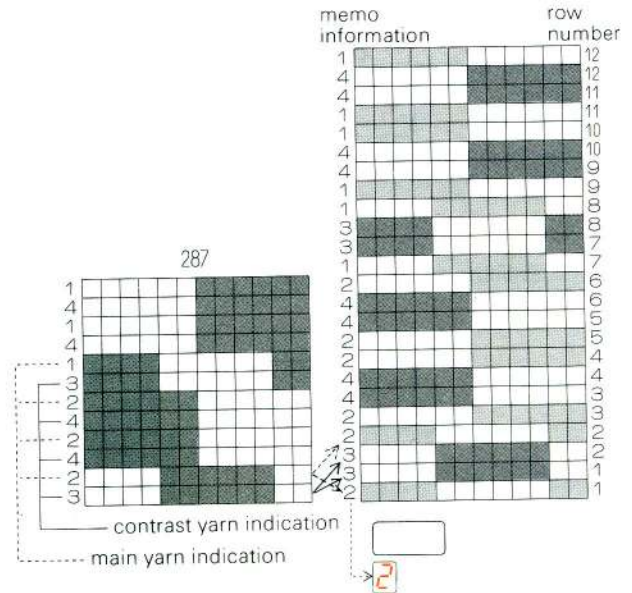
- ② When the memo information is on the odd row only: —

- Knit with only one main yarn but several contrast yarns.
- The number 1 in the memo display tells you to knit with the main yarn, and the other numbers distinguish between the contrast yarns.

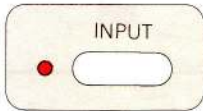


- ③ When the memo information is on both the odd numbered rows and even numbered rows —

- Knit with several main yarns and several contrast yarns.
- The numbers in the memo display indicates which



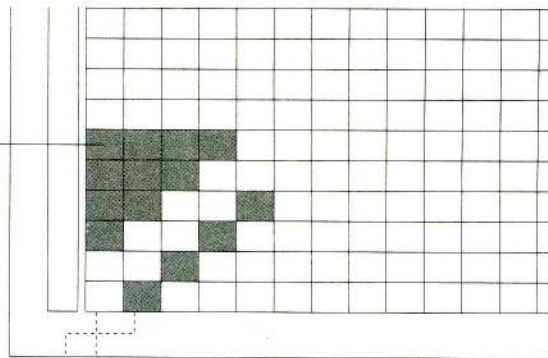
HOW TO PROGRAM YOUR OWN PATTERNS



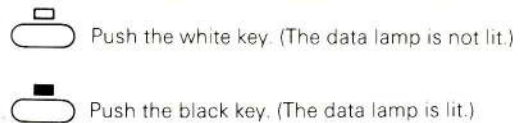
- You can enter and store your own switch patterns in the computer by using the input program.
- This facility allows you to both enter and delete patterns of your own design.

Data keys and Data lamps

- First draw your stitch pattern onto a design sheet.





- Then enter this pattern, stitch by stitch, using the data keys.



- The data lamp shows what pattern data has been entered.



- What is the difference between the data keys?

-  A stitch entered with the black key is selected to D position.
-  A stitch entered with the white key is selected to B position.

How large is the memory for your own patterns?

You can store a maximum of approx. 254,600 stitches (about 50 pages on the design sheet) or a maximum of 98 patterns.

- ♣ This number varies according to the number of stitches (horizontal direction) of the pattern.

A pattern can be from 1 to 200 stitches. (But on the machine, only 112 (except yellow 57 and green 57) stitches can be knit.) The maximum number of rows available to you is calculated automatically by the computer when you enter the number of stitches you want for the pattern. You don't have to use all the rows indicated as available however.

The computer will give each of your own patterns a number (from 901 — 998). You are advised to use this same number for your own reference, to avoid any confusion.

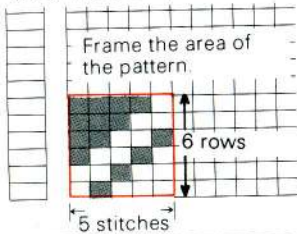
● HOW TO PROGRAM (INPUT PROGRAM)

① STORING YOUR OWN PATTERN

- You store your own patterns with the  and  keys.

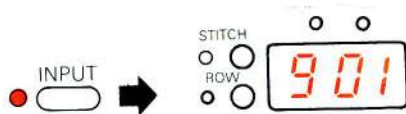
Ex. Enter the following pattern.

(DESIGN SHEET)



- Before starting to enter your own patterns, you must prepare the following:—
- ① Draw your own design onto one of the blank design sheets which come with the machine.
 - ② Draw a frame around your design.
 - ③ Count the number of stitches and the number of rows which make up the pattern.

- ① Make sure the ready lamp is lit and push the input key.
(The ready lamp goes off.)



● PATTERN NO. Your own pattern is given a number by the computer.
(Use this number yourself as a reference on your design sheet to avoid confusion.)

- The computer allocates the number 901 for your 1st pattern, number 902 for your 2nd pattern, and so on automatically.

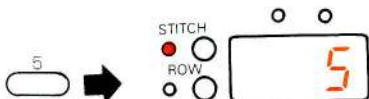
- ② Enter the number of stitches.

(1) Push the step key.



----- The lamp at the side of the stitch key is lit and the computer asks for the number of stitches in the pattern.

(2) Enter 5 as the number of stitches.

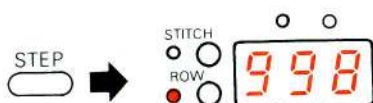


----- The display shows the number you have entered.

♥ If you should make a mistake, push the CE key to clear the display, and enter the correct number.

- ③ Enter the number of rows.

(1) Push the step key.



----- The lamp beside the row key is lit, and the display shows the maximum number of rows available for you to use for your own pattern. (You can use up to 998 rows.)

(2) Push the CE key to clear the display and enter 6 as the number of rows for your own patterns.





----- The display shows the number entered.

- Even if you want to use the number of rows that display shows, clear the display with CE key and enter the number again.

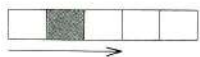
- ④ Push the step key.



- ♣ If the pattern has large area, it takes 3—4 seconds until the display changes for next step.

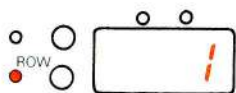
5 Enter your own pattern data by pushing the  key or the  key according to your drawing on the design sheet.

(1) Enter the pattern data for the first row.

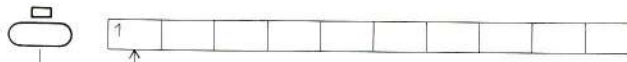



♥ If you make a mistake, refer to page 58.

1

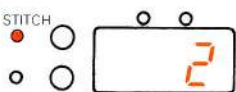


The lamp beside the row key is lit and the display shows the row number. (The first stitch of the first row is shown.)

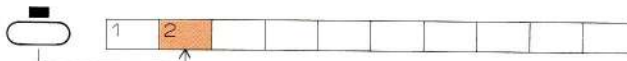


Enter the pattern data for the first stitch. When you enter pattern data with the  key, the data lamp is not lit.

2

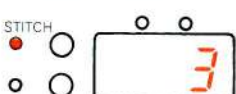


The lamp beside the stitch key is lit and the display shows the stitch number. (The 2nd stitch is shown.)

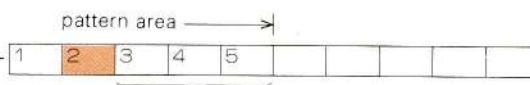



Enter the pattern data for the 2nd stitch. The data lamp 2 is lit.


3



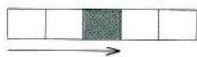
The 3rd stitch is shown.



If the remainder of the pattern data for the first row is "blank", you don't have to push the  key.

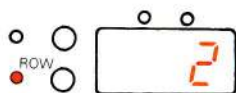
♣ If you prefer you can also push the  key to enter pattern data for every stitch.

(2) Enter the pattern data for the 2nd row.

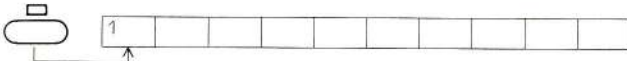



1 Push the up key to advance the row number.

2

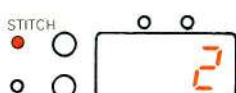


The first stitch of the 2nd row is shown.

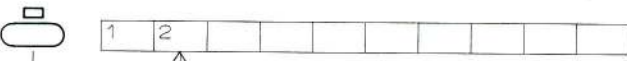


Enter the pattern data for the first stitch. When you enter pattern data with the  key, the data lamp is not lit.

3

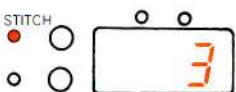


The 2nd stitch is shown.



Enter the pattern data for the 2nd stitch. The data lamp is not lit.

4

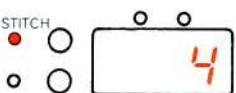


The 3rd stitch is shown.

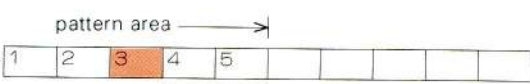



Enter the pattern data for the 3rd stitch. The data lamp 3 is lit.

5



The 4th stitch is shown.



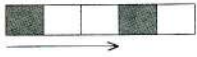
If the remainder of the pattern data for the 2nd row is "blank", you don't have to push the  key.

What to do if you want to check the pattern data position, while you are entering data.

You can check the pattern data position by changing the indication in the display with the row key or the stitch key.

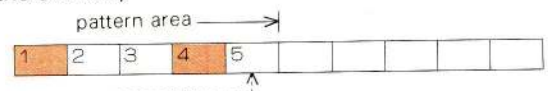
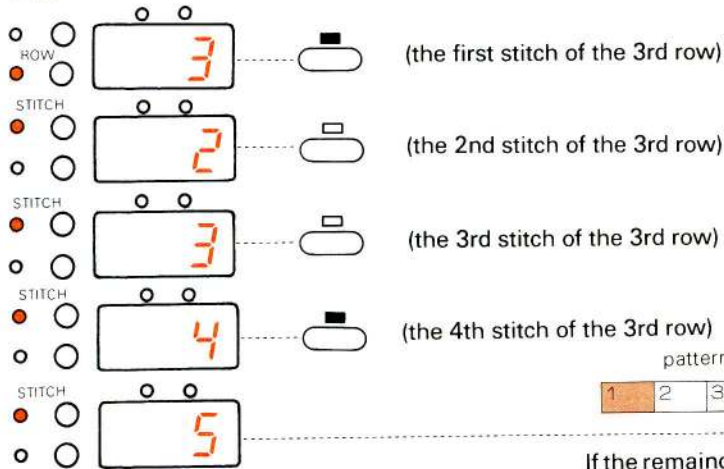
- When the display shows the stitch number ...
Push the row key. The display changes to show the row number.
- When the display shows the row number ...
Push the stitch key. The display changes to show the stitch number.

(3) Enter the pattern data for the 3rd row.



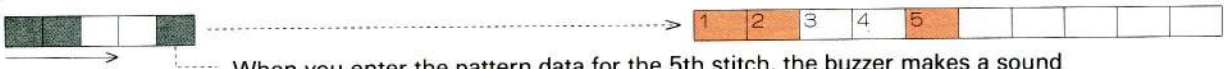
① Push the up key to advance the row number.

② Follow the indication on the display and enter the pattern data for the 3rd row with the and keys in the same way as you did for the first and 2nd rows, according to your drawing.



If the remainder of the pattern data for the 3rd row is "blank", you don't have to push the key.

(4) Advance the row number by pushing the up key and enter the pattern data for the 4th row with the key and the key.



When you enter the pattern data for the 5th stitch, the buzzer makes a sound which tells you that you have reached the end of the program row.

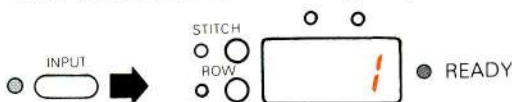
(5) Advance the row number by pushing the up key and enter the pattern data for the 5th row with the key and the key.



(6) Advance the row number by pushing the up key and enter the pattern data for the 6th row with the key and the key.



(7) After you have finished entering the pattern data, push the input key. (The input lamp goes out).



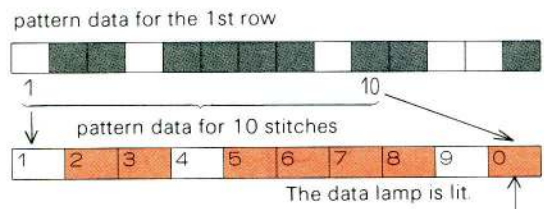
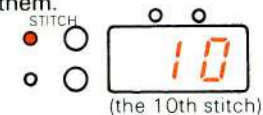
The ready lamp is lit and the input program is completed.

- ♣ When you want to enter memo information, see page 46.
- ♣ When you want to knit from one of your own patterns, use the pattern number which it was allocated by the computer. Enter this when the pattern number lamp is lit during pattern programming.

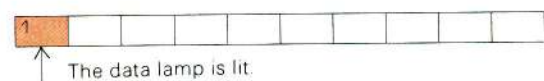
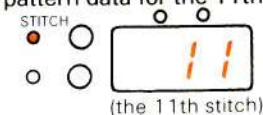
What to do when your pattern has more than 10 stitches in one row.

(Example: Pattern with 14 stitches)

① The data lamps indicate the pattern data from the first to the 10th stitch in the order you have entered them.



② When you enter pattern data for the 11th stitch, all the pattern data lamps for the first 10 stitches go off, and the first data lamp now indicates the pattern data for the 11th stitch.

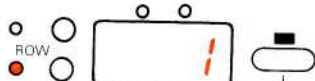


③ The 2nd data lamp indicates the pattern data for the 12th stitch, and so on.

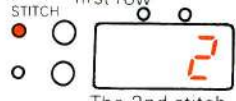
How to enter the same pattern data continuously.



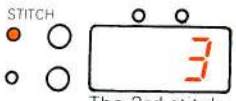
You can enter the same pattern data by pushing the data key continuously.



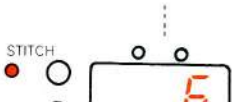
The first stitch of the first row



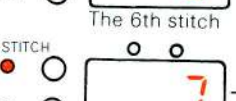
The 2nd stitch



The 3rd stitch



The 6th stitch



The 7th stitch

Keep pushing.

Release the data key.

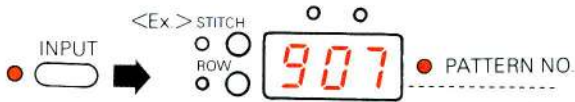
Next stitch number you can input.



② HOW TO DELETE YOUR OWN PATTERNS

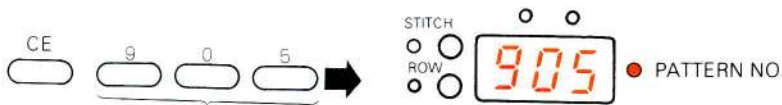
- Enter the pattern number that you want to delete and push the C key.

- ① Make sure that the ready lamp is lit. Push the input key. (The ready lamp goes off and the input lamp is lit.)



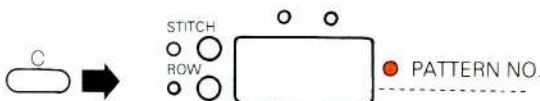
The pattern number in the display depends on the number of stored patterns.

- ② Push the CE key to clear the display and enter the number for the pattern that you want to delete.



Example: 905 is the pattern number to be deleted.

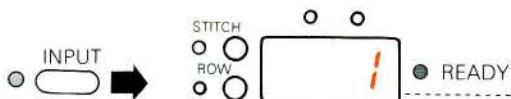
- ③ Push the C key.



The number in the display goes out and the computer deletes the stored pattern.

- ♣ If you want to delete more than one stored pattern, repeat steps ②—③.

- ④ Push the input key after you have finished deleting stored patterns. (The input lamp goes out.) The ready lamp is lit and the input program is completed.

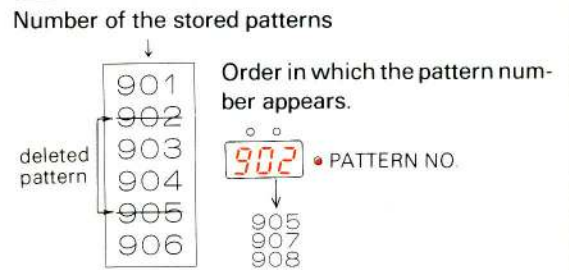


The display and the memo display show the pattern program as it was before you started the input program.

The order in which the pattern numbers appear in the input program.

- The lowest vacant pattern number appears in the display.

Ex.

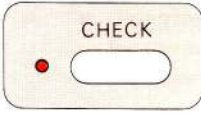


● GUIDELINES WHEN MAKING YOUR OWN PATTERNS

When designing your own stitch patterns, please bear the following points in mind.

	STITCHES	ROWS
<p>TUCK STITCH PATTERN MULTI-COLOUR TUCK STITCH PATTERN</p> <p><input type="checkbox"/> ... Tuck Stitch <input checked="" type="checkbox"/> ... Stocking Stitch</p>	<p>You can't have two tuck stitches together.</p>	<ul style="list-style-type: none"> • thick yarn ... Do not pull up the stitches more than 4 rows.
<p>PLATED TUCK STITCH PATTERN</p> <p><input type="checkbox"/> ... Tuck Stitch</p>	<p>You can't have two tuck stitches together.</p>	<ul style="list-style-type: none"> • chunky yarn ... Do not pull up the stitches more than 2 rows.
<p>WEAVING PATTERN</p> <p><input checked="" type="checkbox"/> ... Knitted by needle selected to D position</p>	<p>Don't weave the yarn more than 3 stitches.</p> <p>3 stitches</p>	
<p>THREAD LACE PATTERN</p> <p><input checked="" type="checkbox"/> ... Knitted by needle selected to D position</p>	<p>Don't select more than 2 needles to D position.</p> <p>2 stitches</p>	
<p>MULTICOLOUR SKIP STITCH PATTERN</p>	<ul style="list-style-type: none"> • thick yarn You can use up to 3 colours in one row. • chunky yarn You can use up to 2 colours in one row. 	
<p>FAIRISLE RIB</p>	<ul style="list-style-type: none"> • In order to use the KRC key, make the pattern in the same way as for ordinary single bed fairisle. Make the pattern with even rows, and change the yarn on the even rows using the KRC. 	

HOW TO CHECK THE PROGRAM FOR YOUR OWN PATTERNS

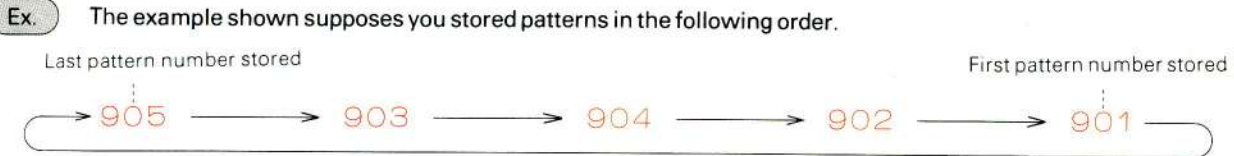


- You can check the pattern number, stitches, rows and pattern data for your own patterns stored in the computer.
- You can also change the pattern data.

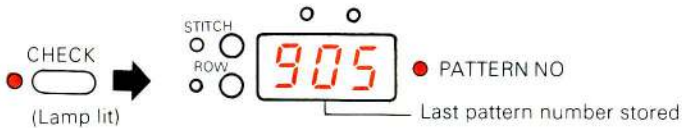
● HOW TO CHECK YOUR PROGRAM

① HOW TO CHECK THE PATTERN NUMBERS YOU HAVE STORED IN THE COMPUTER.

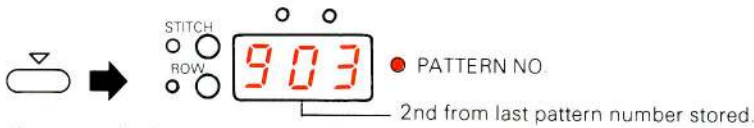
- When you push the down key, the display shows the pattern numbers in order, beginning with the last one stored in the computer.



- ① When the ready lamp is lit, push the check key.
(The ready lamp goes off.)

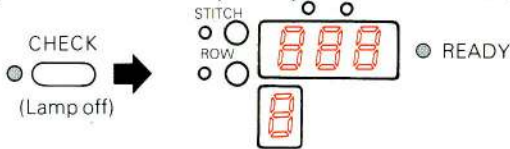


- ② Push the down key



As you push the down key, the display shows the pattern numbers in the order they were entered, starting with the final number (e.g., 904-902-901-905).

- ③ Push the check key after you have checked the pattern number.



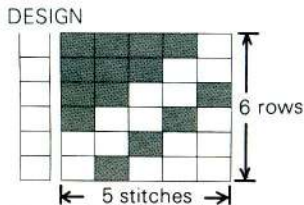
- ♣ The ready lamp is lit and the program check complete.

- ♣ The display and the memo display show the previous pattern program as it was before you began your program check at step ①

② CHECK THE PATTERN DATA YOU HAVE STORED IN THE COMPUTER

- ① Check the pattern data with the data lamp.
- ② Check the pattern data with the buzzer.

Ex. This example was knitted using pattern no.901.

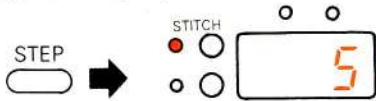


You begin the same for both method 1 and method 2.

- ① When the ready lamp is lit, push the check key.
(The ready lamp goes off.)

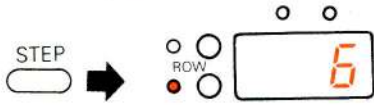


② Push the step key.



The stitch lamp is lit and the display shows the number of stitches for the pattern. (You cannot change this.)

③ Push the step key.

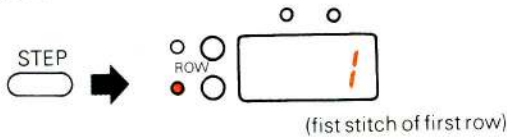


The row lamp is lit and the display shows the number of rows for the pattern. (You cannot change this.)

◆ For Method 2, please refer now to page 58.

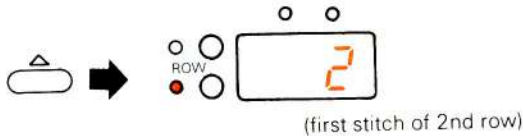
Method 1: How to check the pattern data using the data lamp.

④ To check the first row: Push the step key.



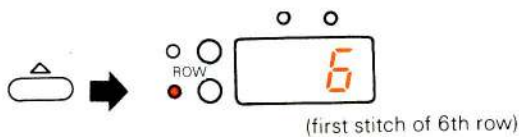
The data lamp shows the pattern data entered for the 1st — 10th stitch. Our example is a 5 stitch pattern, so the data lamps show the pattern data for 5 stitches.

⑤ To check the 2nd row: Push the up key to advance the row number to the next row.



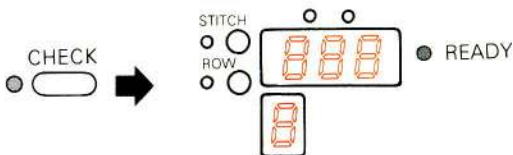
The data lamps show the pattern data entered for the 1st — 5th stitch of the 2nd row.

⑥ Repeat these steps to check the pattern data for the 3rd — 6th row.



The data lamps show the pattern data entered for the first — 5th stitch of the 6th row.

⑦ After checking the pattern data, push the check key.



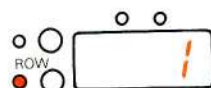
♣ The ready lamp is lit and the program check is completed.

♣ The display and the memo display show the previous pattern program as it was before you began your program check at step ①.

You can finish the program check whenever you wish by turning off the check key.

How to use the data lamps when the pattern has more than 10 stitches in one row.

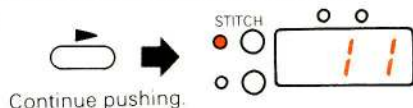
① When the display shows the first stitch of the first row, the data lamps refer to the pattern data for stitches 1 — 10.



(Example: a row with 14 stitches.)





② If you advance the stitch number in the display to 11 by pushing the right key, the data lamps refer to the pattern data for stitches the next 10 stitches, i.e. stitches 11 — 20.

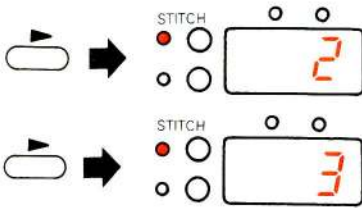



The example has 14 stitches, so the data lamps indicate the pattern data from the 11th—14th stitches.

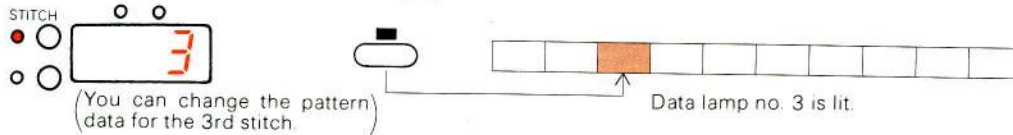
What to do when you find a mistake in the middle of a program.

- Using the right or left key, move along the row so that the number is in the display. You can change the stitch programmed for the number with the  or the  key.
Example: Change the pattern data for the 3rd stitch.



① Push the right key to advance the number in the display to the 3rd stitch.

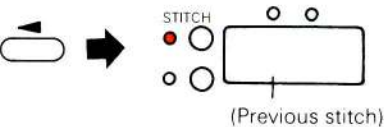
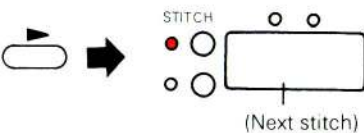
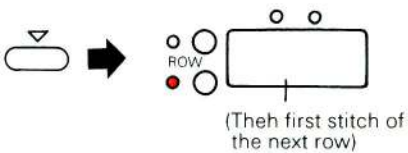
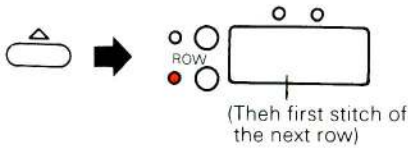


② Enter the pattern data for the 3rd stitch with the  key.



- Even if you push the data key, the number in the display is not changed. Use the up, down, left and right keys to move around the pattern.

- The indication in the display is changed when you push the up, down, left or right keys. (Pattern data for the number indicated in the display can be changed with the  or  key..)





- Advance the row number in the display.
- When you push the up key, the display shows the first stitch of the next row.
- If you push the up key when the display shows the final row of the pattern, then the number in the display will be the first stitch of the first row.
- Turn back the row number in the display.
- When you push the down key, the display shows the first stitch of the previous row.
- If you push the down key when the display shows the first row of the pattern, then the number in the display will go back to the first stitch of the final row.
- Advance the stitch number in the display.
- Push the right key when the display shows the row number, and the display will show the next stitch of the same row.
- Push the right key when the display shows the last stitch of the row, and the display will show the first stitch of the same row.
- Turn back the stitch number in the display.
- Push the left key when the display shows the row number, and the display will show the previous stitch of the same row.
- Push the left key when the display shows the first stitch of the row, and the display will show the last stitch of the same row.

Method 2: How to check the pattern data using the buzzer.

Push the buzzer key and the buzzer will make a sound according to the pattern data for the row, from the number in the display to the end of the row.

- Sound of the buzzer

 Pi! Pi! (2 short notes)

 Pee! (One long note)

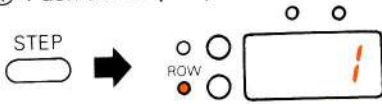
- How to check the pattern data.

Push the buzzer key and you will hear the sound "Pi!". Then the buzzer will make sounds according to the pattern data.



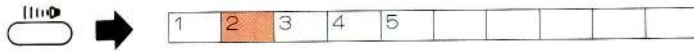
④ How to check the first row.

① Push the step key.



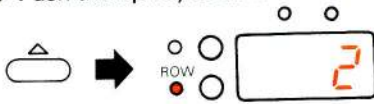
The buzzer will make a sound according to the pattern data from the first stitch of the first row.

② Push the buzzer key. The buzzer now makes a series of appropriate sounds to enable you to check the pattern data.



⑤ How to check the 2nd row.

① Push the up key to advance the row number.



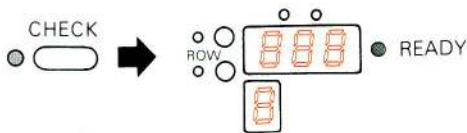
The buzzer will make a sound according to the pattern data from the first stitch of the 2nd row.

② Push the buzzer key. The buzzer now makes a series of appropriate sounds to enable you to check the pattern data.



⑥ Continue checking the pattern data for the 3rd to 6th row by repeating the steps above.

⑦ When you have finished checking the data, push the check key.

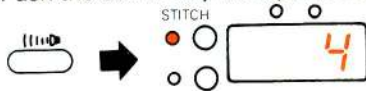


♣ The ready lamp is lit and the program check is completed.

♣ The display and the memo display show the previous pattern program as it was before you began your program check at step ①.

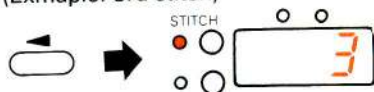
• What to do if you find a mistake in the middle of your program.

① Push the buzzer key to stop the sound.



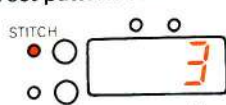
Check with the data lamps and your design sheet to find the mistake. (Example: 3rd stitch)

② Push the left key to move the indication in the display back to the stitch you want to change. (Example: 3rd stitch)

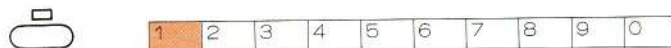


♣ You can now change the pattern data which is indicated in the display.

③ Enter the correct pattern data for the 3rd stitch.

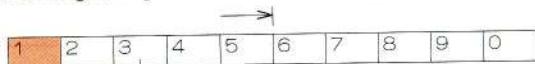


(You can change the 3rd stitch.)



Data lamp no.3 goes off.

④ Push the buzzer key. The buzzer will make the appropriate sounds beginning with the stitch number in the display.



Pee! Pee! Pee!

- You can change the indication in the display by pushing the up, down, right or left keys (see page 58).
- Move the number in the display to the particular position you want to check, so that you need only check the pattern data for that part.
- Push the buzzer key if you want to stop the sound of the buzzer.
- The program check can be finished at any time.
 - ① — While you are checking the pattern data with the buzzer, use the buzzer key to stop the sound.
 - ② — To finish the program check, turn off the check key.

SPECIAL PROGRAM

- How to begin knitting the pattern from row 1 when the display indicates another row number
- Needle selection for the first row will be done by pushing the start key.

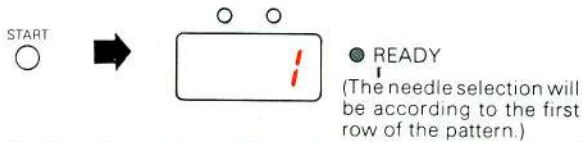
Ex.

- ① The 3rd row is indicated in the display



(The display tells you to knit the 3rd row.)

- ② Push the start key. (The display now indicates the first row.)



(The needle selection will be according to the first row of the pattern.)

• THE FUNCTION OF THE START KEY

When you push the start key, even if the display indicates any other row number in the pattern, it will change to row 1. Needle selection will also be according to the first row of your pattern.

HOW TO GET BACK TO ROW 1

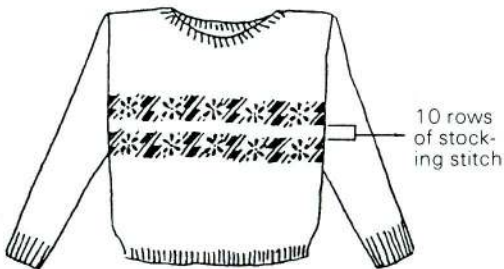
When you want to begin a new piece of knitting, but haven't changed the pattern number, (e.g. if you are making the parts of a garment) the display will show the number for the row you last knitted in pattern. To get back to the first row of your pattern, push the start key and the number in the display will revert to 1.

• HOW TO KNIT SEVERAL ROWS OF STOCKING STITCH BETWEEN PATTERN KNITTING

- Use the start key.

Ex.

How to knit 10 rows of stocking stitch between the pattern knitting.

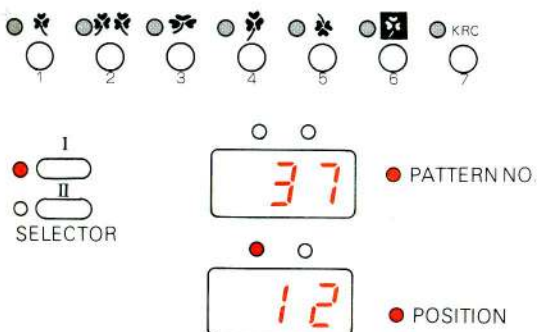


10 rows of stocking stitch

This fairisle example was knitted using pattern no.37.

• How to knit

- ① Program the pattern as follows and knit the 1st pattern.



- ② Now set the change knob to N. Take the contrast yarn out of yarn feeder B. Knit 9 rows of stocking stitch and place the K carriage outside the turn mark. The last (10th) row is the needle selection row for the first row of the next pattern.

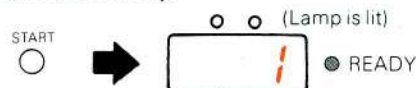
- ③ Check the information shown in the display.

- ① (Lamp is flashing on and off.)



This indicates the needle selection for the first row needs to be done.

- ② Push the start key.

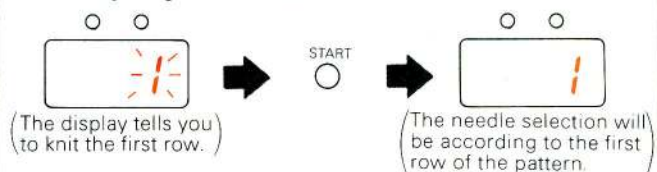


This indicates the needle selection for the first row needs to be done.

- ④ Make sure the K carriage is outside the turn mark. Now set the change knob to KC and knit one row. The needles are selected for the first row of the next pattern.

- ⑤ Push the MC button and thread the contrast yarn into yarn feeder B. Now knit the second pattern.

- The difference between the blinking row number and the lighting row number



(The display tells you to knit the first row.)

(The needle selection will be according to the first row of the pattern.)

You must always select the needles first before you start pattern knitting.

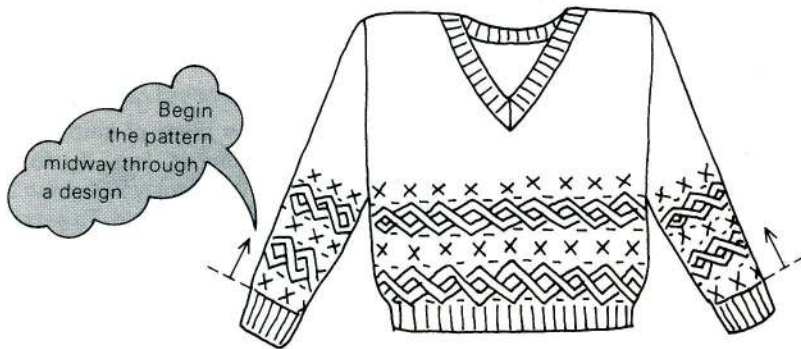
When the number in the display is flashing on and off, it means the needle selection has been done. Return the display to number 1 by pushing the start key. The flashing will cease, and the needles will be selected according to row 1 of the pattern.

● HOW TO BEGIN KNITTING MIDWAY THROUGH A PATTERN

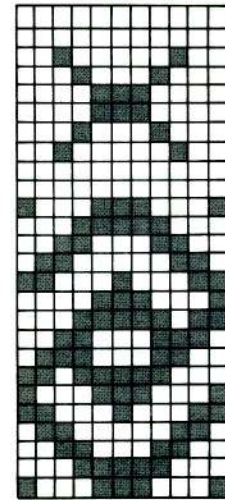
- You don't always have to start your pattern on row 1. Advance the number in the display to the row where you want to begin by pushing the up or down key.

Ex.

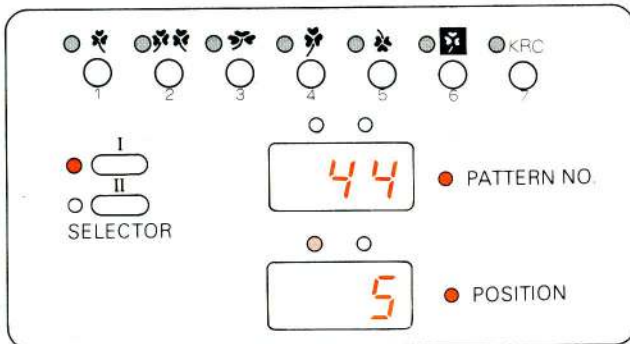
- Begin the pattern in a different place so that the sleeves and body match.
- The example is worked with pattern no.1.



DIAGRAM



• How to program



- ① Program the pattern as shown left. The ready lamp is now lit and number 1 appears in the display.

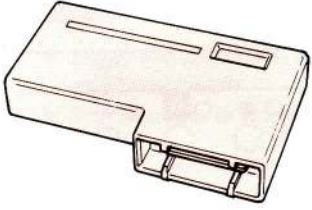


- ② Push the up or down key until the number for the row at which you want to start is shown in the display.



- ♣ Continue pattern knitting in the normal way.

CARTRIDGE (OPTIONAL ACCESSORY)



cartridge

Cartridge

You can store your own original pattern, which you entered in the knitting machine computer, in the cartridge. Once you store the pattern in the cartridge, you can load it to the knitting machine time and time again.

♣ When using the pattern programming device....

This cartridge works with the pattern programming device and you can create the pattern on the TV screen.

CAUTION

- Do not insert or remove the cartridge to/from the slot with the power switch on.
- Do not touch the metal part of the bottom of the cartridge with the fingers or metal.
- Do not get the cartridge wet.
- Do not drop the cartridge or put something on it.
- Do not leave the cartridge in a hot or humid place.
- The battery of the cartridge saves the data about ten years. When ten years have passed from purchasing the cartridge, ask a dealer to change the battery.

MEMORY CAPACITY

Memory capacity of this cartridge is as big as that of the knitting machine memory.

SAVING AND LOADING

SAVING Means storing on the cartridge the data which has been memorized by the knitting machine.

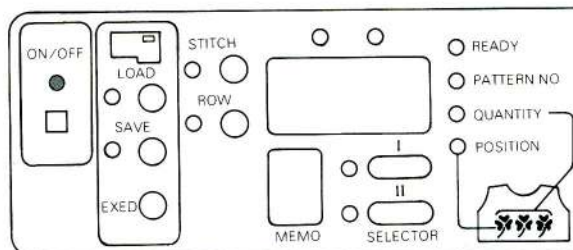
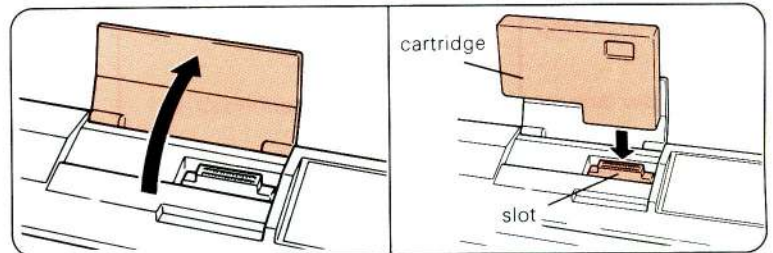
CAUTION: When you save the data on the page which already has the data on it, the old data will be deleted.

LOADING Means transferring to the knitting machine the data saved on the cartridge.

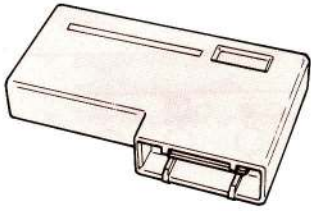
CAUTION: When you load the data to the knitting machine, all the data in the knitting machine is deleted. Save the data first, if necessary. (Built-in patterns are not deleted.)

● SAVING AND LOADING

- ① Turn off the power switch of the knitting machine.
- ② Open the lid of the cartridge slot to the left of the operation panel. Insert the cartridge into the slot.
- ③ Turn on the power switch of the knitting machine.



CARTRIDGE (OPTIONAL ACCESSORY)



cartridge

Cartridge

You can store your own original pattern, which you entered in the knitting machine computer, in the cartridge. Once you store the pattern in the cartridge, you can load it to the knitting machine time and time again.

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CAUTION

- Do not insert or remove the cartridge to/from the slot with the power switch on.
- Do not touch the metal part of the bottom of the cartridge with the fingers or metal.
- Do not get the cartridge wet.
- Do not drop the cartridge or put something on it.
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MEMORY CAPACITY

Memory capacity of this cartridge is as big as that of the knitting machine memory.

SAVING AND LOADING

SAVING Means storing on the cartridge the data which has been memorized by the knitting machine.

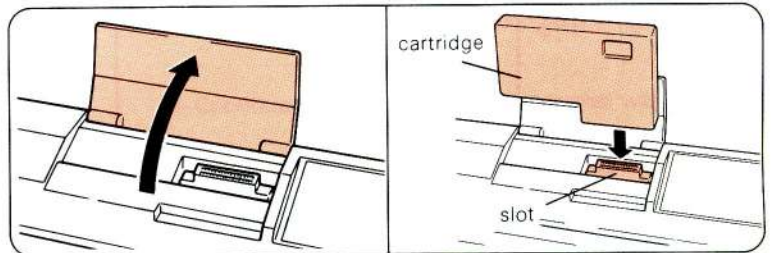
CAUTION: When you save the data on the page which already has the data on it, the old data will be deleted.

LOADING Means transferring to the knitting machine the data saved on the cartridge.

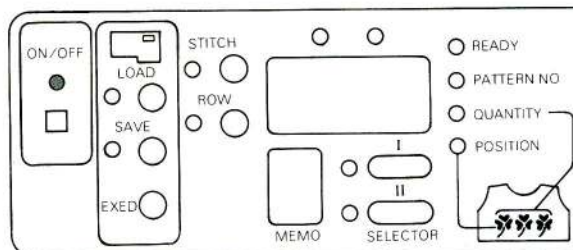
CAUTION: When you load the data to the knitting machine, all the data in the knitting machine is deleted. Save the data first, if necessary. (Built-in patterns are not deleted.)

● SAVING AND LOADING

- ① Turn off the power switch of the knitting machine.
- ② Open the lid of the cartridge slot to the left of the operation panel. Insert the cartridge into the slot.



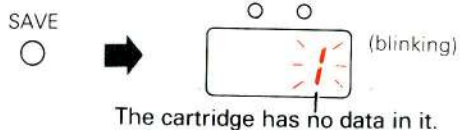
- ③ Turn on the power switch of the knitting machine.



④ Operating the necessary procedure on the panel transfers the data (saving or loading). Follow the steps below.

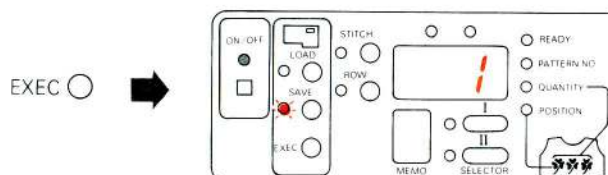
SAVING

- ① Push the save key.
The display shows 1.



- ♣ When 1 is lighting, it means that the cartridge has data in it.
- ♣ If you save the data in this case, the data already saved in the cartridge will be deleted.
- ♥ If you push the save key by mistake, push the correct key and operate the necessary procedure.

- ② Push the execute key.
The save lamp is blinking and saving begins.

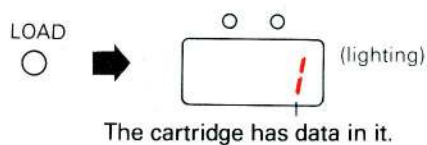


When saving is finished, the buzzer beeps and all the display except power lamp on the panel goes out.

- ③ Turn off the power switch of the knitting machine.
Take out the cartridge.

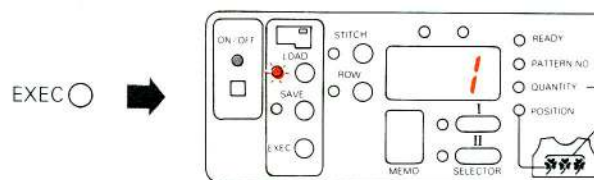
LOADING

- ① Push the load key.
The display shows 1.



- ♣ When 1 is blinking, it means that the cartridge has no data in it.
- ♥ If you push the load key by mistake, push the correct key and operate the necessary procedure.

- ② Push the execute key.
The load lamp is blinking and loading begins.



When loading is finished, the buzzer beeps and all the display except power lamp on the panel goes out.

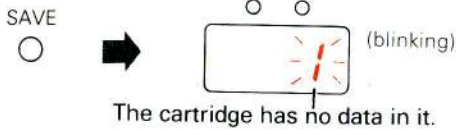
- ③ Turn off the power switch of the knitting machine.
Take out the cartridge.

To knit the pattern loaded to the knitting machine...
Turn on the power switch of the knitting machine.
Program the pattern (see page 18).
♣ Select the pattern no. given by the computer.

④ Operating the necessary procedure on the panel transfers the data (saving or loading). Follow the steps below.

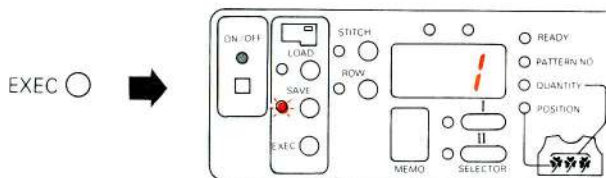
SAVING

- ① Push the save key.
The display shows 1.



- ♣ When 1 is lighting, it means that the cartridge has data in it.
- ♣ If you save the data in this case, the data already saved in the cartridge will be deleted.
- ♥ If you push the save key by mistake, push the correct key and operate the necessary procedure.

- ② Push the execute key.
The save lamp is blinking and saving begins.

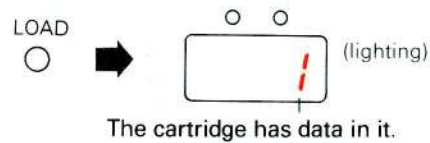


When saving is finished, the buzzer beeps and all the display except power lamp on the panel goes out.

- ③ Turn off the power switch of the knitting machine.
Take out the cartridge.

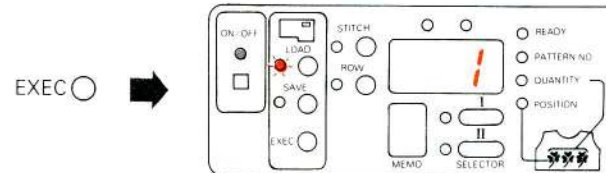
LOADING

- ① Push the load key.
The display shows 1.



- ♣ When 1 is blinking, it means that the cartridge has no data in it.
- ♥ If you push the load key by mistake, push the correct key and operate the necessary procedure.

- ② Push the execute key.
The load lamp is blinking and loading begins.



When loading is finished, the buzzer beeps and all the display except power lamp on the panel goes out.

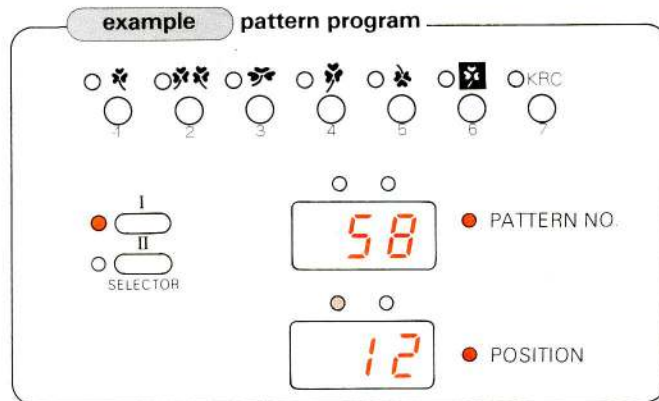
- ③ Turn off the power switch of the knitting machine.
Take out the cartridge.

To knit the pattern loaded to the knitting machine...
Turn on the power switch of the knitting machine.
Program the pattern (see page 18).
♣ Select the pattern no. given by the computer.

PATTERN KNITTING

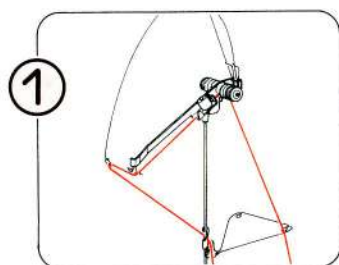
FAIRISLE PATTERN (SELECTOR I)

- <ex.> pattern no. 58

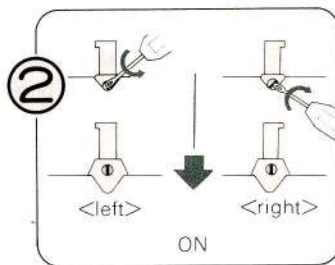


• pattern knitting

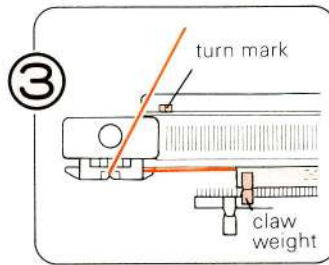
Prepare two yarns (main yarn and contrast yarn).



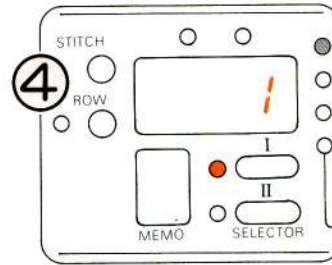
1 Thread the main yarn into the right yarn tension unit (see page 13).



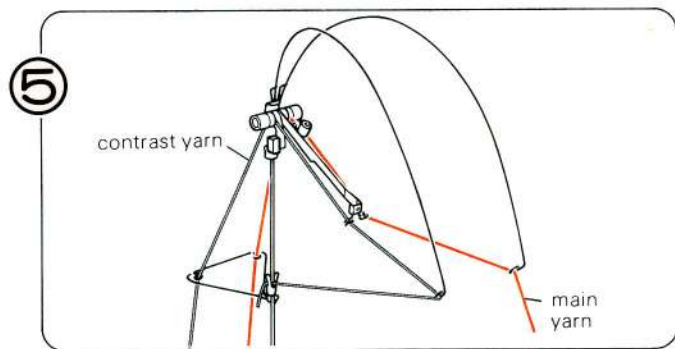
2 Set the end needle selection mechanism to ON (see page 12).



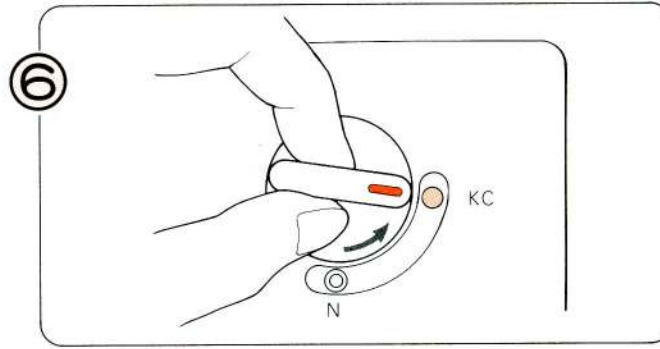
3 Knit a few rows in stocking stitch and place the K carriage outside the left turn mark. Hang the claw weights evenly along the cast-on comb.



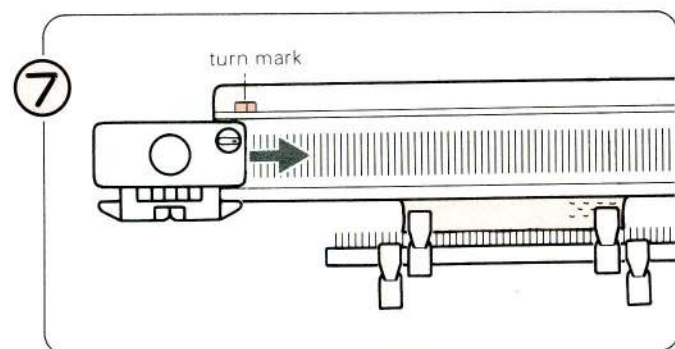
4 Program your pattern (see page 19).



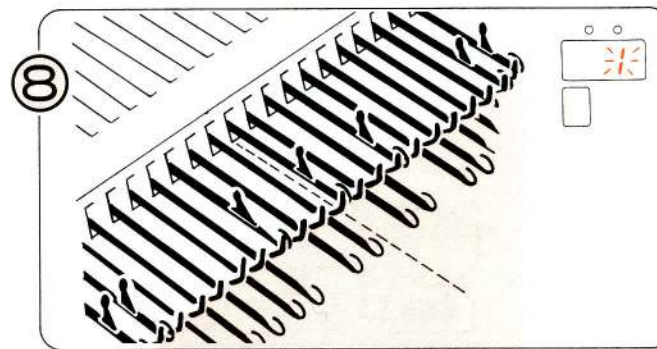
5 Thread the contrast yarn into the left yarn tension unit.



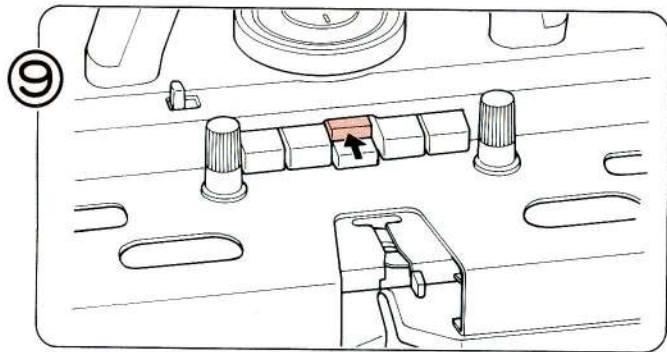
6 Set the change knob to KC.



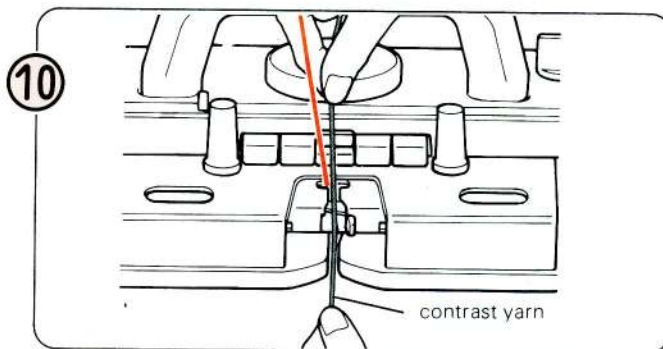
7 Move the K carriage from left to right across the left turn mark.
 ♣ You only need to operate the K carriage once across the turn mark when you start pattern knitting.



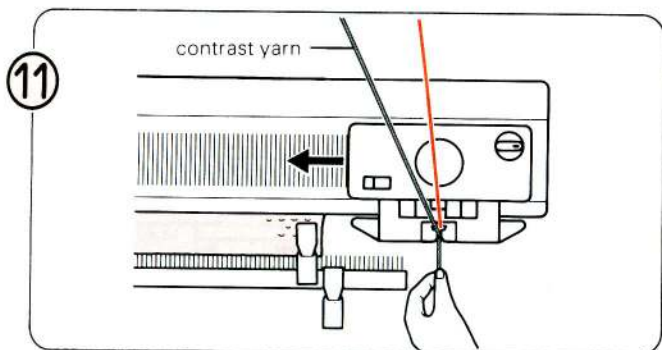
8 The needles are selected. Number 1 flashes on and off in the display to tell you to knit the first row of the pattern.



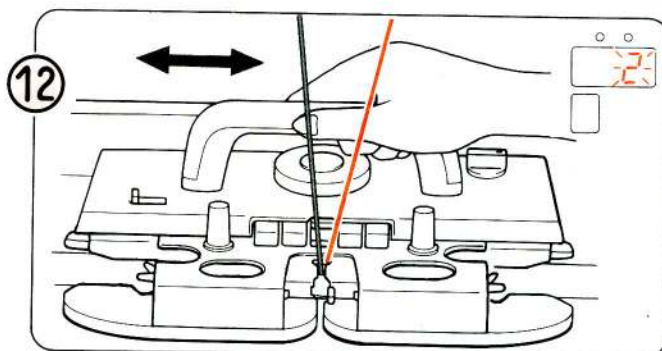
9 Push the upper MC button.



10 Thread the contrast yarn into the yarn feeder B — there is no need to open the yarn feeder lever when you do so.

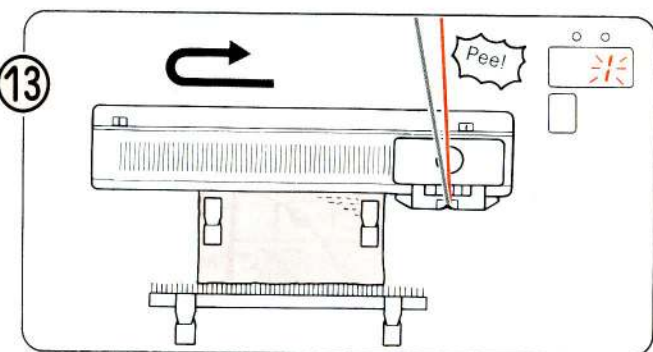


11 Holding the yarn end with your hand, move the K carriage from right to left.



12 The number 2 flashes on and off in the display to tell you to knit the second row of the pattern. Move the K carriage to the right and then to the left. You are now knitting in fairisle pattern.

♣ Rehang the claw weight every 10 rows or so.

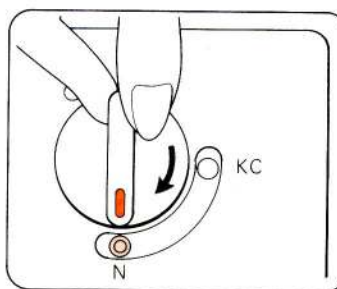


13 Knit in pattern until you hear the sound "Peel!". Finish the row and knit one more row. Number 1 flashes on and off in the display. You have now knitted one complete pattern in length.

• You can either continue:

Repeat steps 12 - 13.

• Or finish pattern knitting ...



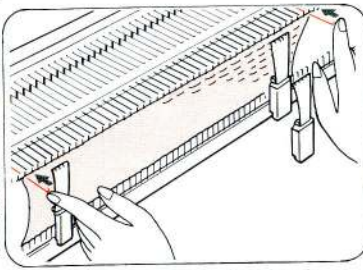
Set the change knob to N. The cam button will be released automatically.

- ♣ While knitting in pattern, you must take the K carriage past the center of the machine (green 1 needle) on every row.
- ♣ When you are using more than two different colour yarns, watch the number in the memo display and change yarns as it indicates.

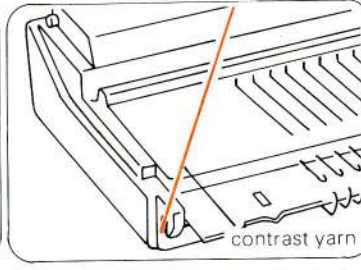
If there are any rows where you use only the main yarn (i.e. no contrast colour). ...

The end needles only will be selected to D position. When this happens, you should do the following:—

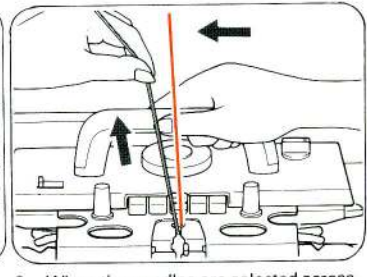
• <ex.> pattern no. 77



1. Bring the end needles back to B position.



2. Take the contrast yarn out of feeder B and hook it around the notch at the end of your machine. Then continue knitting with the main yarn only, bringing the end needles back to B position on each row.

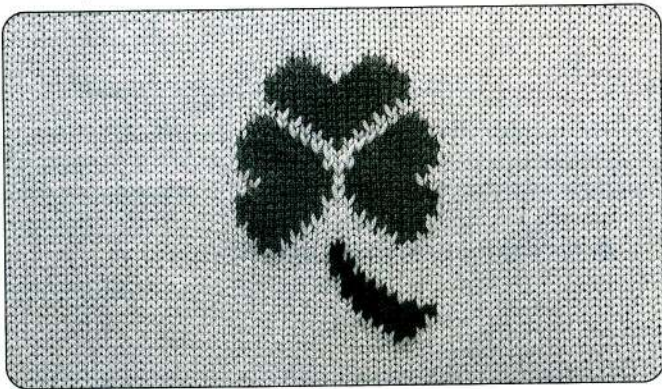


3. When the needles are selected across the row again for the pattern, rethread the contrast yarn into feeder B and knit the row, holding the contrast yarn as shown so that no loops form at the edges.

FAIRISLE PATTERN (SELECTOR II)

Let's knit one-point motif in fairisle.

• <ex.> pattern no. 77.



example pattern program

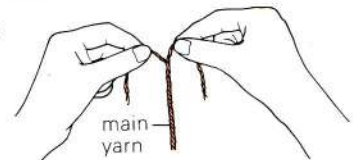
1 2 3 4 5 6 KRC 7
 SELECTOR

(1) **77** ● PATTERN NO. (3) **10** ● POSITION
 (2) **1** ● QUANTITY
 (4) **0** ● QUANTITY
2

• Prepare sufficient balls of yarn according to the pattern data.

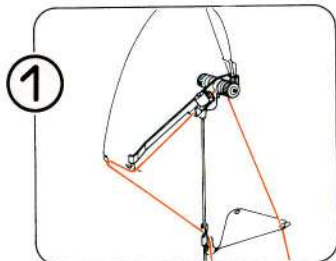
To knit one-point motif fairisle...

Separate the main yarn in two.

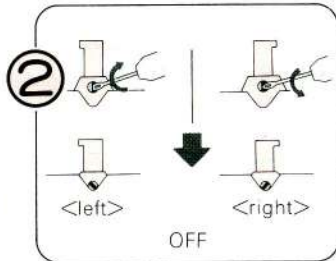


The stitches at the edges of one-point motif need to be bound in with the rest of the knitting, so that there are no holes. To do this, use length of stranded main yarn called "finishing yarn".

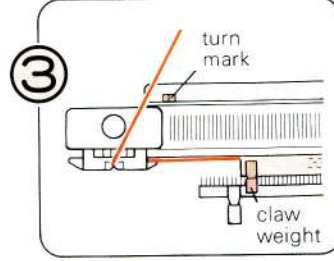
• pattern knitting



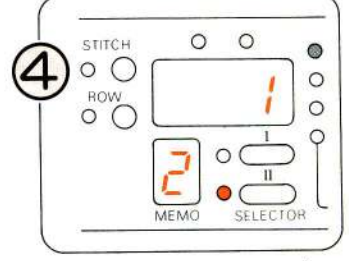
1 Thread the main yarn into the righthand yarn tension unit (see page 13).



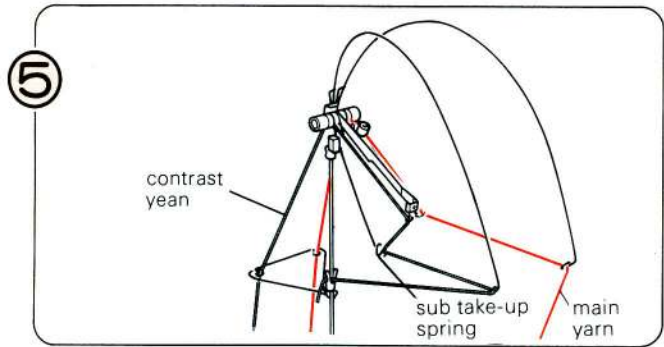
2 Set the end needle selection mechanism to OFF (see page 12).



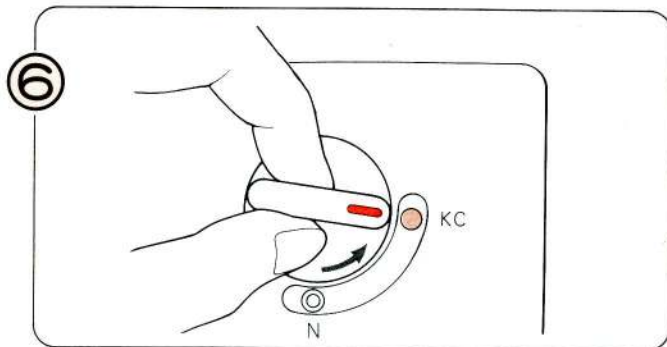
3 Knit a few rows in stocking stitch and place the K carriage outside the left turn mark. Hang the claw weight evenly along the cast-on comb.



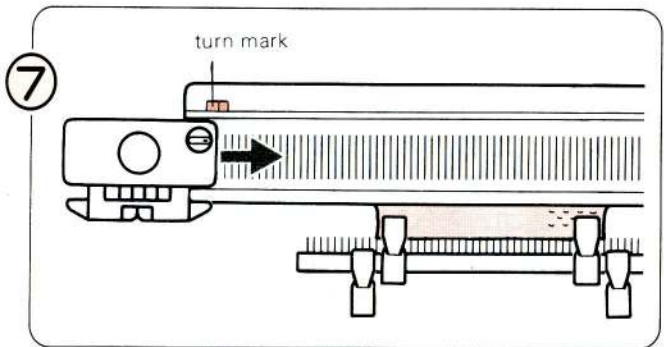
4 Program your pattern (see page 27).



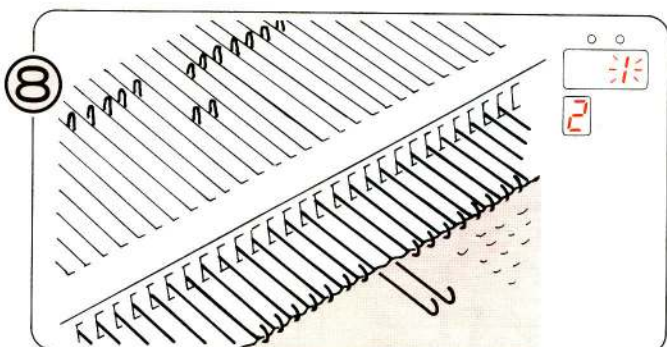
Thread the contrast yarn into the left yarn tension unit, including the sub take-up spring.



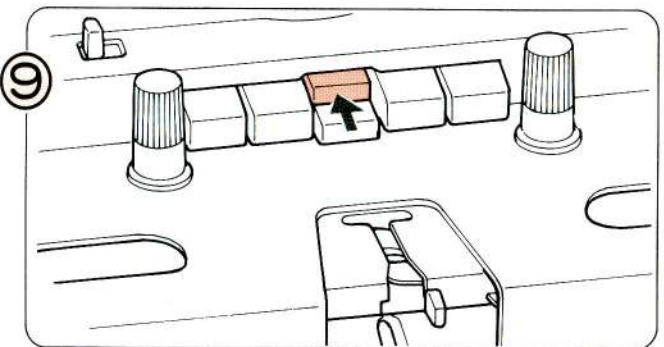
Set the change knob to KC.



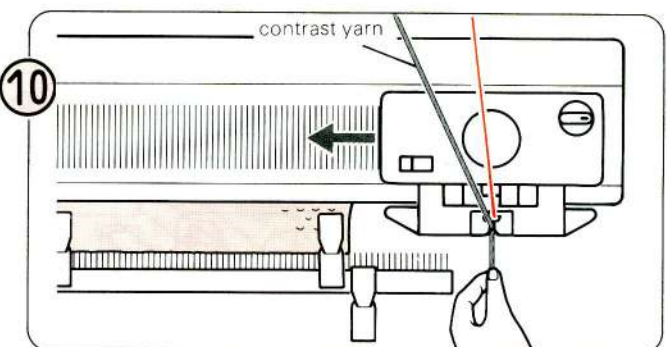
Move the K carriage from left to right across the left turn mark.
♣ You only need to operate the K carriage once across the turn mark when you start pattern knitting.



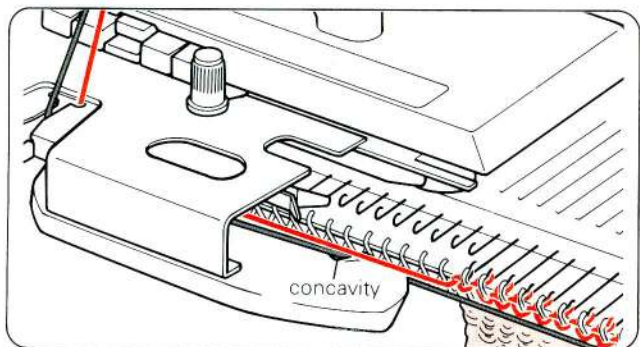
The needles are selected. Number 1 flashes on and off in the display to tell you to knit the first row of the pattern.



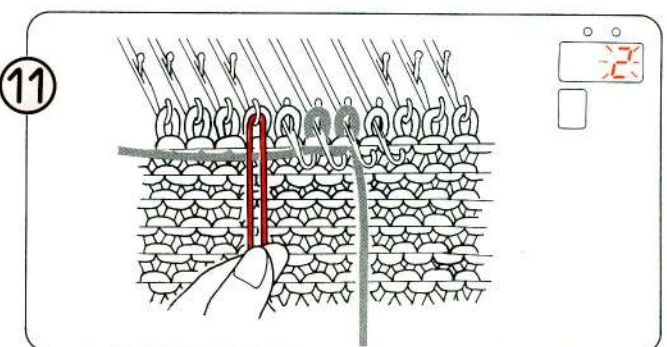
Push the upper MC button.



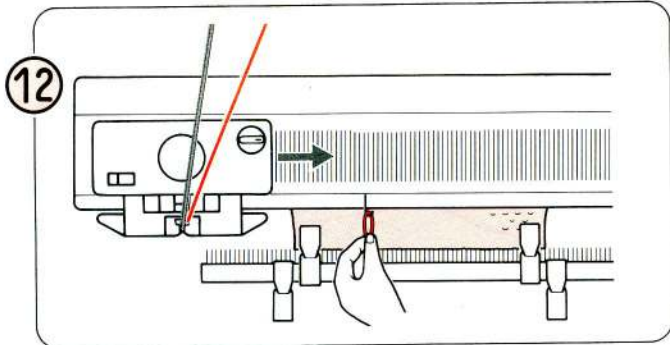
Thread the contrast yarn into yarn feeder B — there is no need to open the yarn feeder lever when you do so. Move the K carriage from right to left.



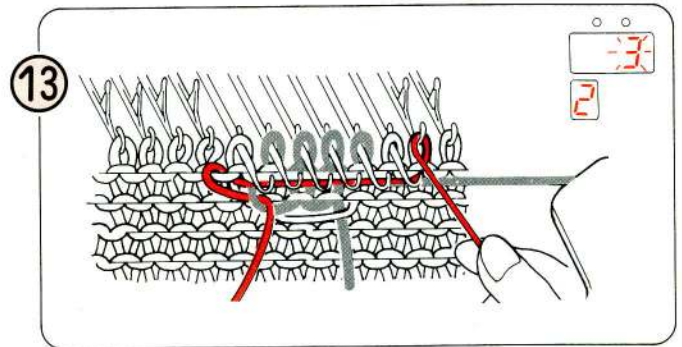
♣ Make sure the contrast yarn goes under the concavity in the sinker plate.



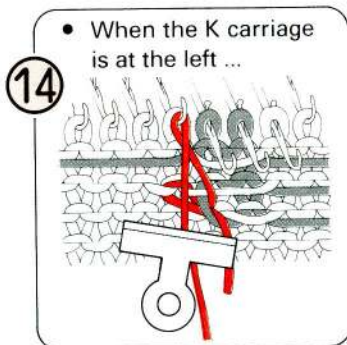
Fold a separate piece of finishing yarn in half, and place it over the needle adjacent to the last selected needle at the left.



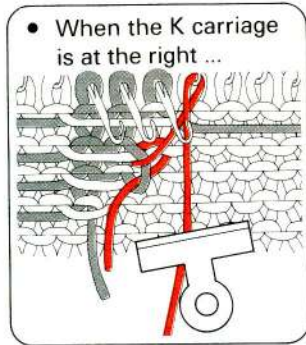
12 Holding the end of the finishing yarn, move the K carriage to the right.



13 Take one end of the finishing yarn under the selected needles, and wrap it from right to left round the needle adjacent to the last selected needle on the right. (See illustration.) Holding the end of the finishing yarn, move the K carriage from right to left.

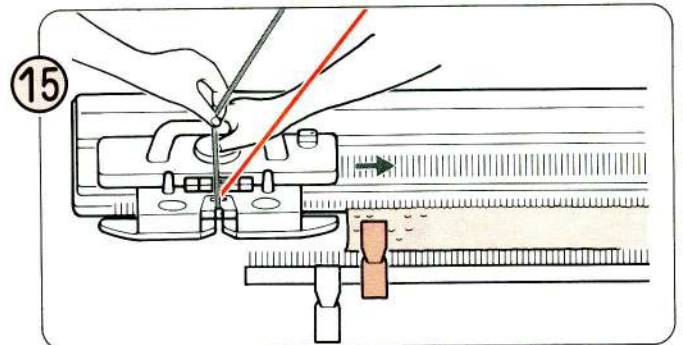


• When the K carriage is at the left ...

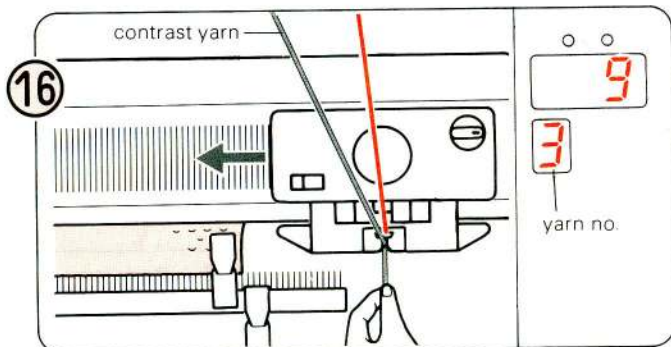


• When the K carriage is at the right ...

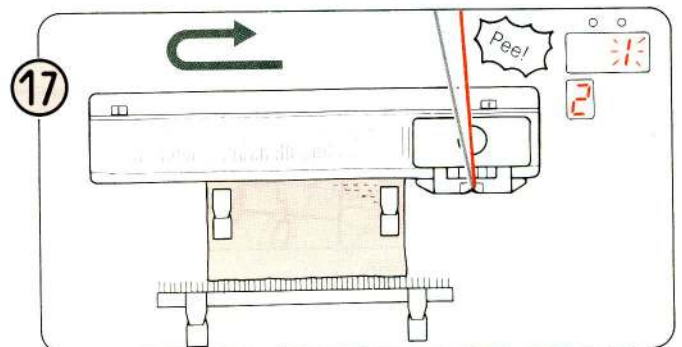
Wrap the finishing yarn around the hook of the needle adjacent to the first selected needle, and pull down gently at every row.



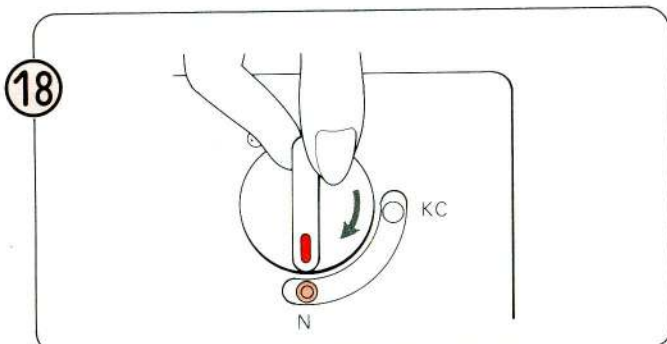
15 Continue knitting pulling the contrast yarn upwards slightly.
♣ Rehang the claw weights every 10 rows or so.



16 When the yarn no. in the memo display changes, change the contrast yarn in the yarn tension unit and the yarn feeder B.



17 Knit in pattern until you hear the sound "Pee!". If you are operating the K carriage from right to left when you hear the sound, finish that row and knit one more row. The number 1 flashes on and off in the display.



18 Set the change knob to N. The cam button will be automatically released. Take out the contrast yarn.

♣ While knitting in pattern, you must take the K carriage past the center of the machine (green 1 needle) on every row.

TUCK STITCH PATTERN

- <ex.> pattern no. 101



example pattern program

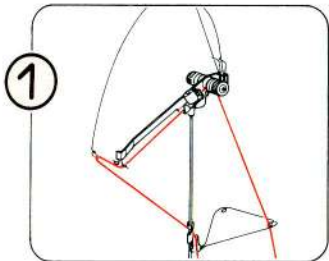
1 2 3 4 5 6 KPC 7

I II
 SELECTOR

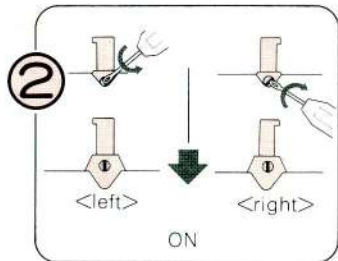
101 **PATTERN NO**

4 **POSITION**

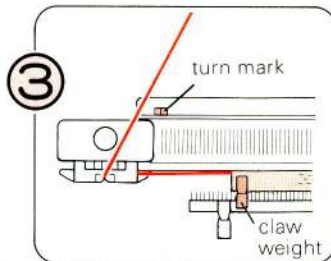
• pattern knitting



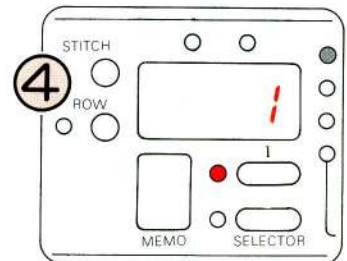
1 Thread the main yarn into the righthand yarn tension unit (see page 13).



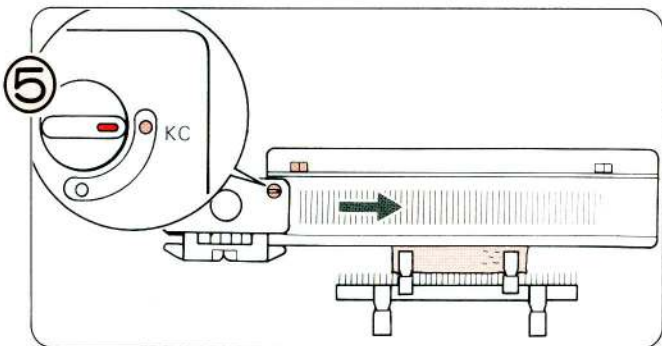
2 Set the end needle selection mechanism to ON (see page 12).



3 Knit a few rows in stocking stitch and place the K carriage outside the left turn mark. Hang the claw weight evenly along the cast-on comb.

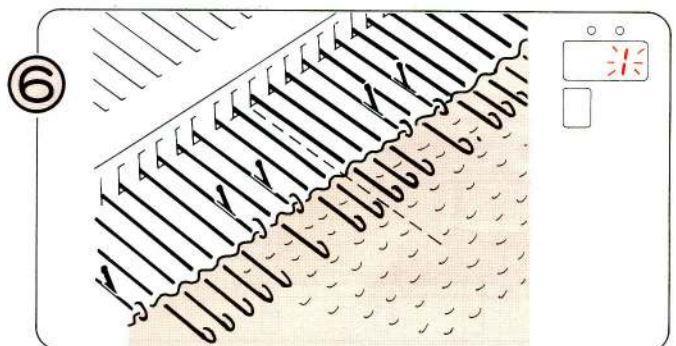


4 Program your pattern (see page 19).

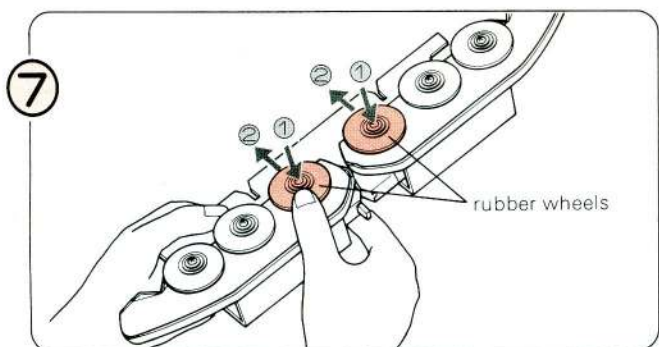


5 Set the change knob to KC. Move the K carriage from left to right across the left turn mark.

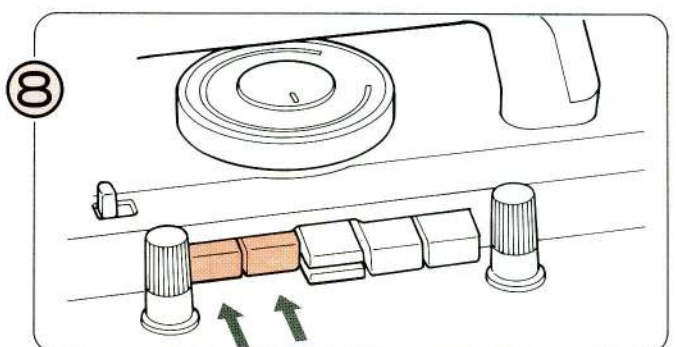
- ♣ You only need to operate the K carriage across the turn mark when you start pattern knitting.



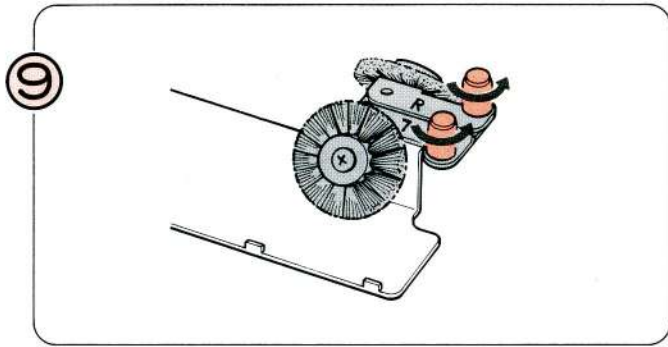
6 The needles are selected. Number 1 flashes on and off in the display to tell you to knit the first row of the pattern.



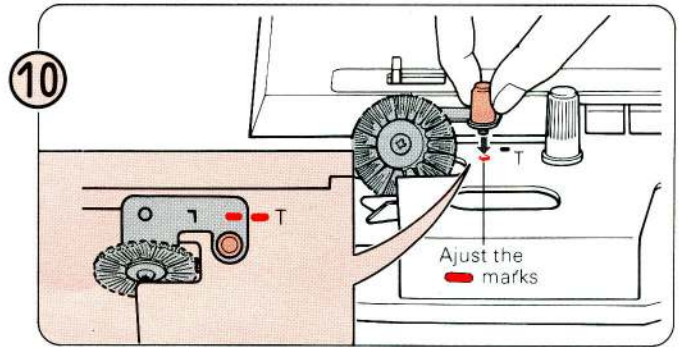
7 Remove the sinker plate assembly from the K carriage and turn it over. Put the rubber wheels into working position as shown. Attach the sinker plate assembly back on the K carriage again.



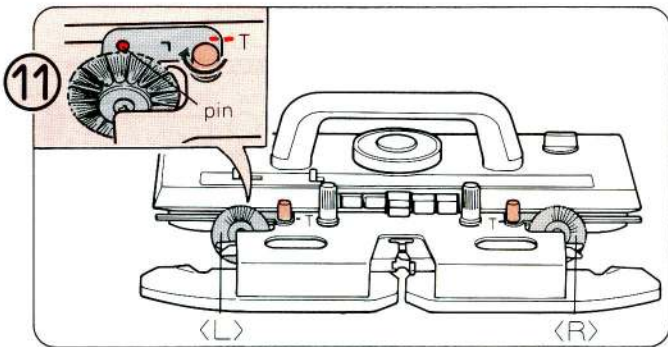
8 Push both tuck buttons at the same time.



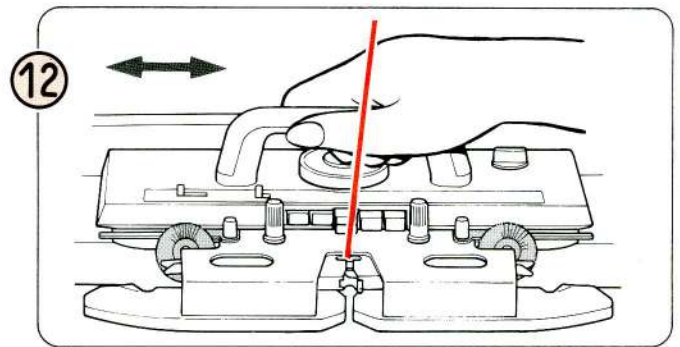
Remove the wheel brushes from the case.



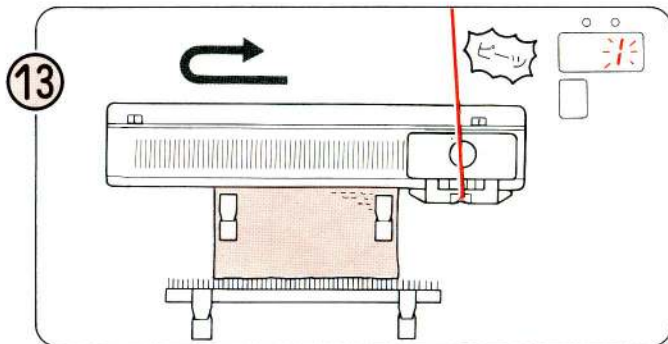
Put the wheel brush (L) into the U-shaped slot on left of the sinker plate and insert the screw into hole on left of **T** mark.



Locate the small pin on the sinker plate into the hole of wheel brush, then tighten screw.
Fix the other brush on the right-hand side.



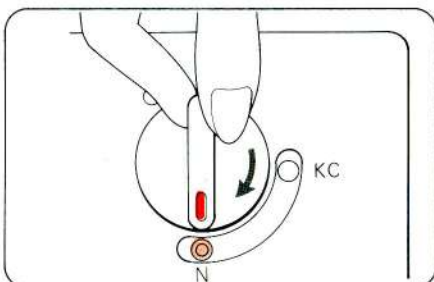
Move the K carriage back and forth.
You are now knitting in tuck stitch pattern. The number in the display tells you the row number you are going to knit next.
♣ Rehang the claw weights every 10 rows or so.



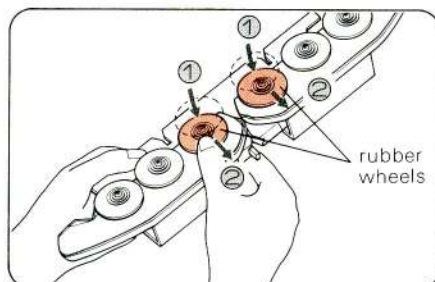
Knit in pattern until you hear the sound "Peel!". If you are operating the K carriage from right to left when you hear the sound, finish the row and knit one more row. Number 1 flashes on and off in the display. You have now knitted one complete pattern in length.

♣ You may not tuck up more than 2 rows according to the thickness or material of the yarn (see "TUCK STITCH PATTERN" on page 55).
♣ While knitting in pattern, you must take the K carriage past the center of the machine (green 1 needle) on every row.

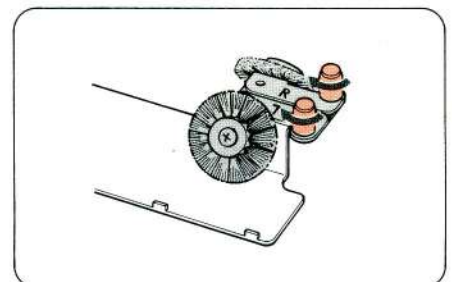
- You can either continue:
Repeat steps 12 — 13 .
- Or finish pattern knitting ...



① Set the change knob to N. The cam buttons will be released automatically.



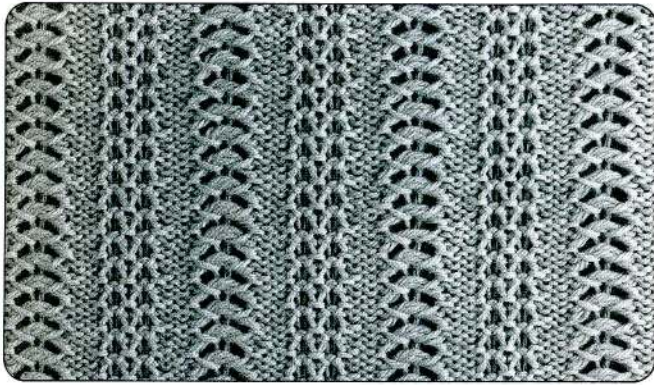
② Place the rubber wheels in non-working position.



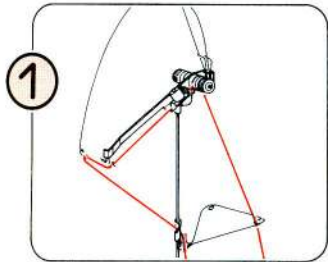
③ Remove the wheel brushes and put them back in the case.

OPEN TUCK STITCH PATTERN

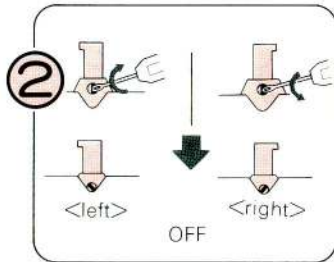
- <ex.> pattern no. 130



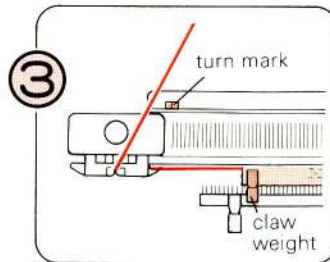
• pattern knitting



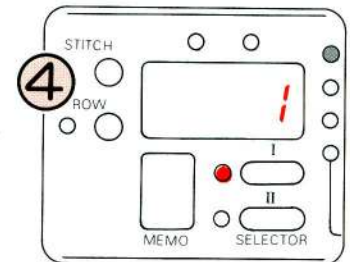
1 Thread the main yarn into the righthand yarn tension unit (see page 13).



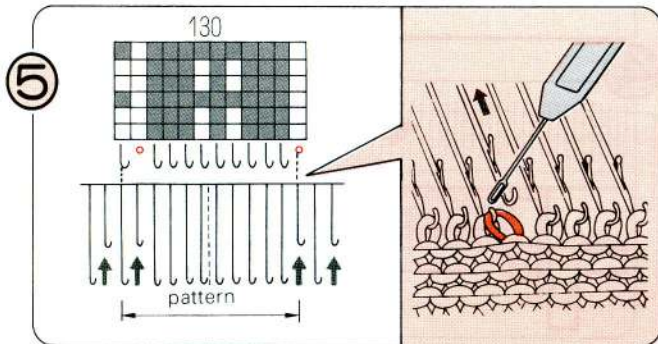
2 Set the end needle selection mechanism to OFF (see page 12).



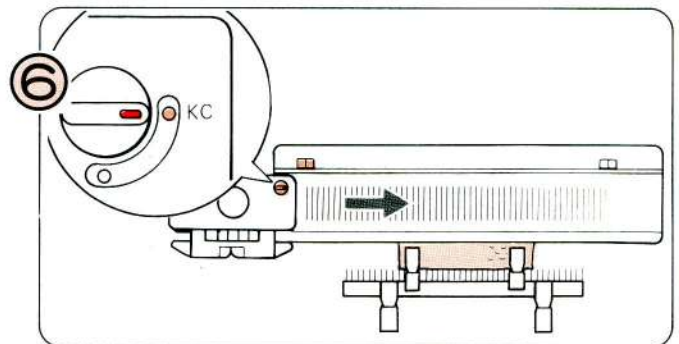
3 Knit a few rows in stocking stitch and place the K carriage outside the left turn mark. Hang the claw weight evenly along the cast-on comb.



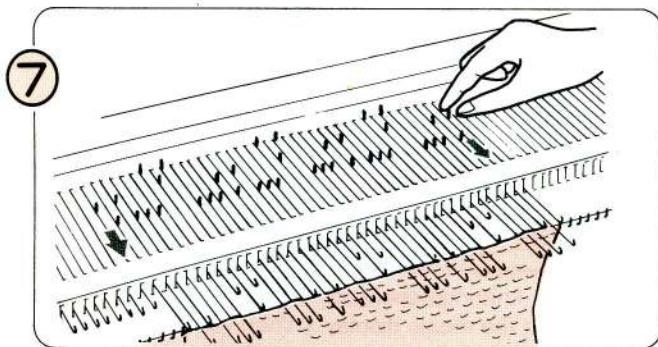
4 Program your pattern (see page 19).



5 Transfer the stitch marked with ○ in the diagram in the pattern book to the adjacent needle. Bring back the empty needle to A position.



6 Set the change knob to KC. Move the K carriage from left to right across the left turn mark. ♣ You only need to operate the K carriage once across the turn mark when you start pattern knitting.



7 The needles are selected. Number 1 flashes on and off in the display to tell you to knit the first row of the pattern. Bring the end needles forward to D position if they are not already in this position.

8 Follow the steps 7 — 13 on pages 70—71. Do not forget the end needles must always be in D position.

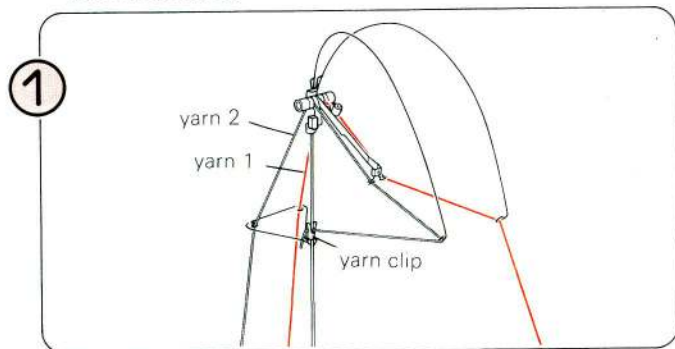
MULTI-COLOUR TUCK STITCH PATTERN

This pattern is worked the same as tuck stitch pattern, except the yarn is changed according to the yarn number in the memo display.

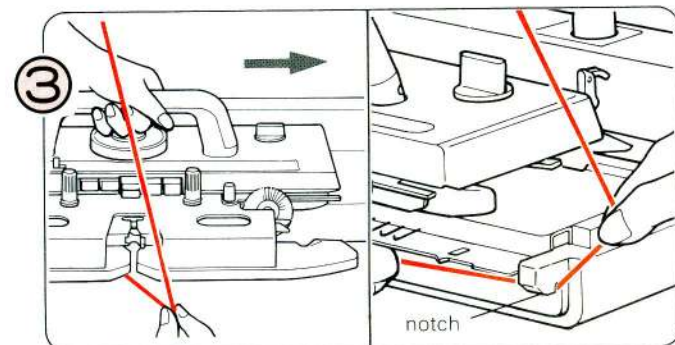
- <ex.> pattern no. 145



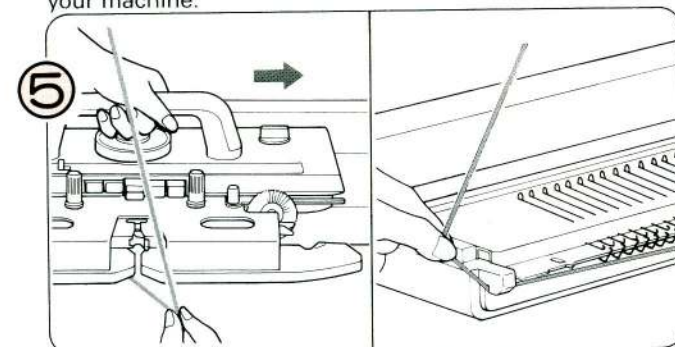
• pattern knitting



Thread the yarn 1 into the righthand tension unit and the yarn 2 into the lefthand one. Follow the steps ② — ⑪ of tuck stitch pattern (see pages 70—71).

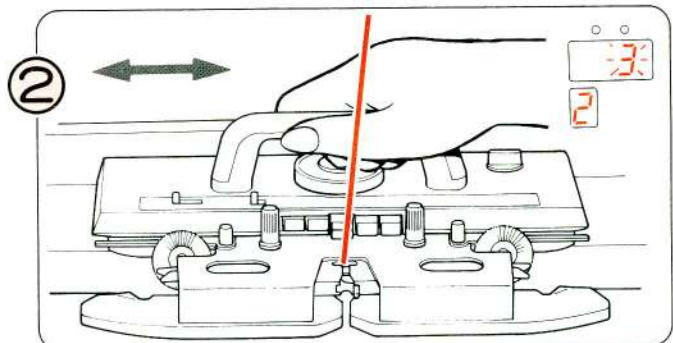
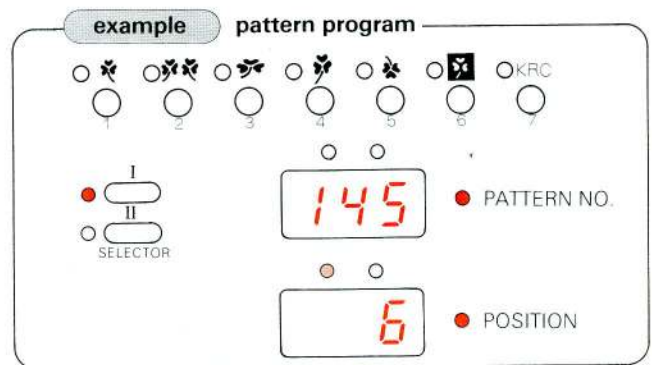


Take yarn 1 out of yarn feeder A. If you slide the K carriage slightly to the right, the yarn can be removed easily. Hook the yarn 1 around the notch at the end of your machine.

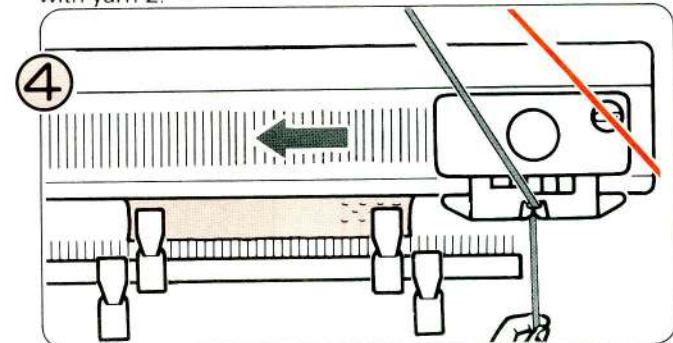


Take the yarn 2 out of yarn feeder A and hook it around the notch at the right end of your machine.

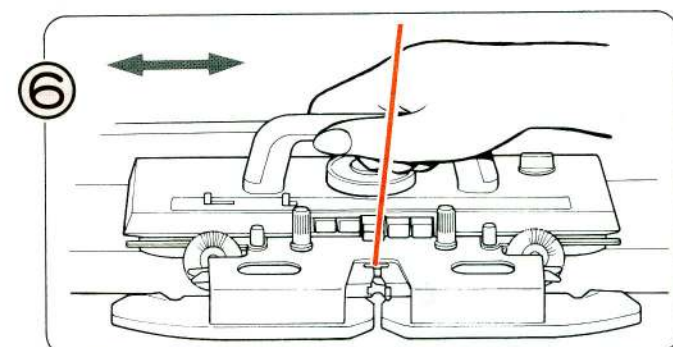
- ♣ Hook the yarn 1 around the notch at the right end of your machine and the yarn 2 around the notch at the left end.



Move the K carriage back and forth until the number 2 appears in the memo display. Number 3 in the display and number 2 in the memo display tell you to knit the third row with yarn 2.



Thread yarn 2 into yarn feeder A and continue knitting until number 1 appears in the memo display.

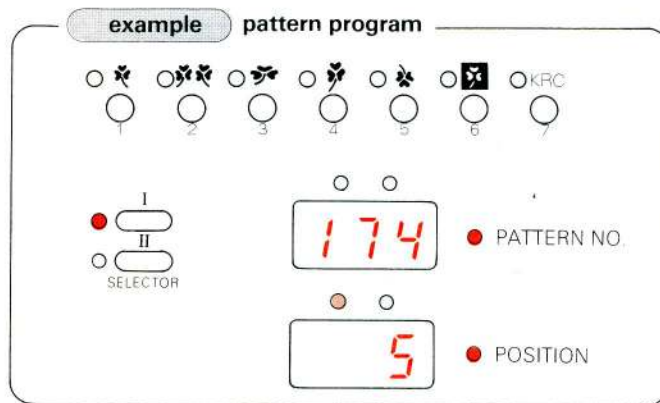
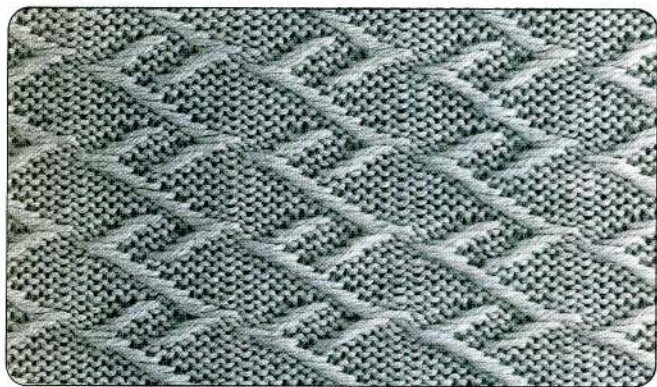


Continue knitting, changing the yarns according to the number in the memo display. (When you change the yarns, take care not to cross them over each other.)

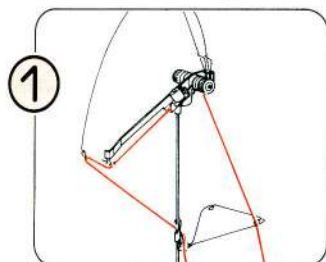
- ♣ Rehang the claw weights every 10 rows or so.

SKIP STITCH PATTERN

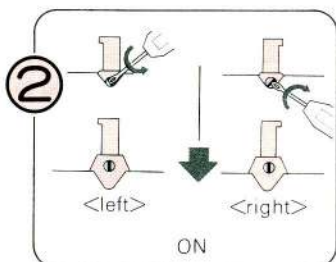
• <ex.> pattern no. 174



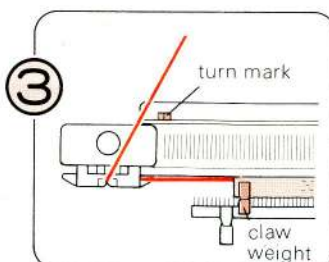
• pattern knitting



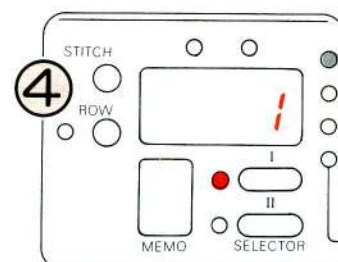
① Thread the main yarn into the righthand yarn tension unit (see page 13).



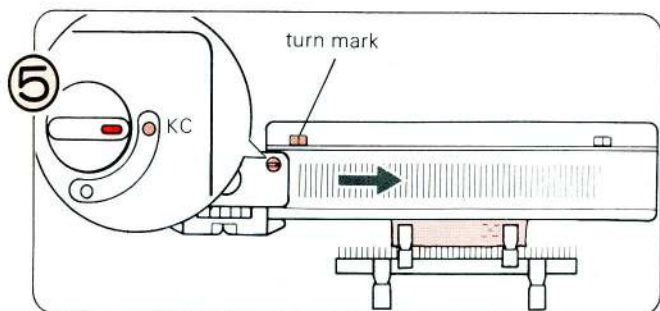
② Set the end needle selection mechanism to ON (see page 12).



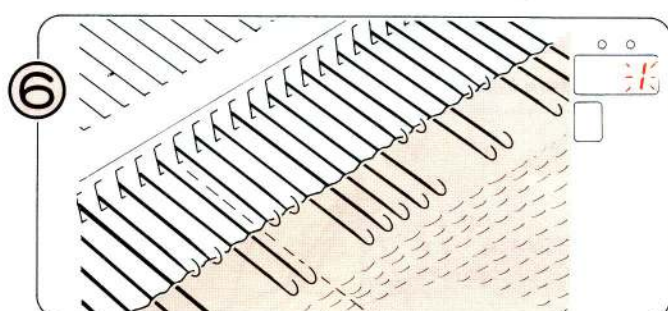
③ Knit a few rows in stocking stitch and place the K carriage outside the left turn mark.
Hang the claw weight evenly along the cast-on comb.



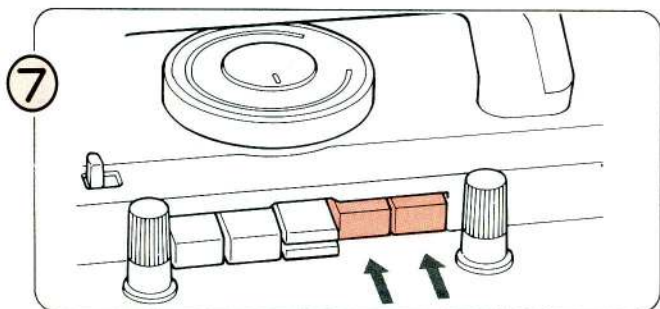
④ Program your pattern (see page 19).



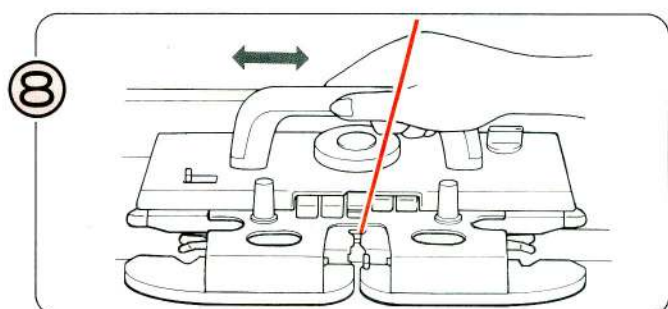
⑤ Set the change knob to KC.
Move the K carriage from left to right across the left turn mark.
♣ You only need to operate the K carriage once across the turn mark when you start pattern knitting.



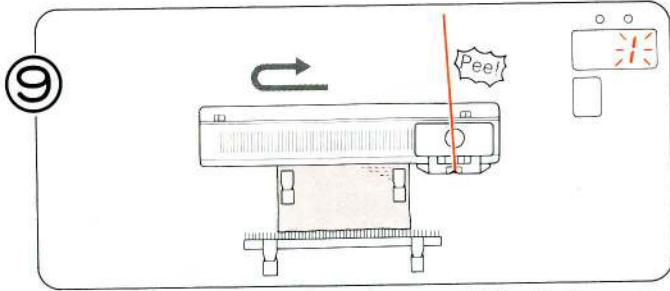
⑥ The needles are selected.
Number 1 flashes on and off in the display to tell you to knit the first row of the pattern.



⑦ Push both part buttons at the same time.



⑧ Move the K carriage back and forth. You are knitting in skip stitch pattern. The number in the display tells you the row you are going to knit next.
♣ Rehang the claw weights every 10 rows or so.

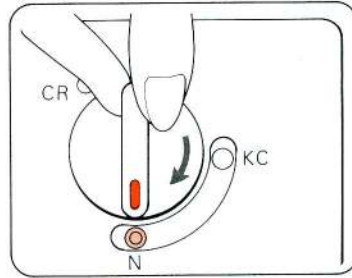


Knit in pattern until you hear the sound "Peel!". If you are operating the K carriage from right to left when you hear the sound, finish that row and knit one more row. The number 1 flashes on and off in the display.

• You can either continue:

Repeat steps ⑧ — ⑨ .

• Or finish pattern knitting ...



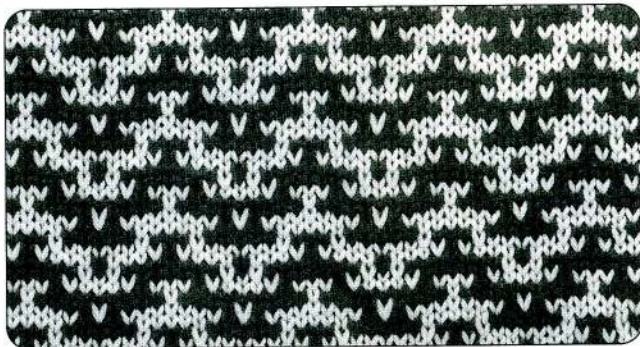
Set the change knob to N. The cam buttons will be automatically released.

♣ While knitting in pattern, you must take the K carriage past the center of the machine (green 1 needle) on every row.

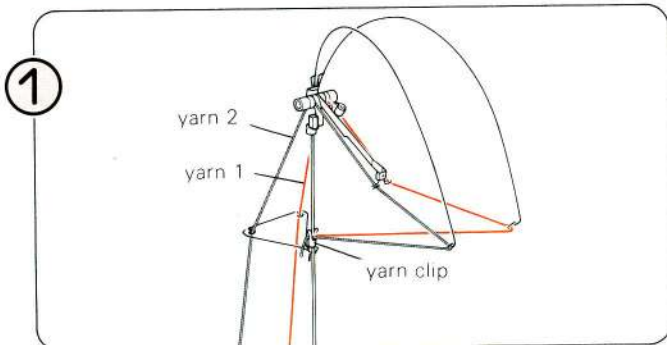
MULTI COLOUR SKIP STITCH PATTERN

This pattern is worked the same as skip stitch pattern, except the yarn is changed according to the numbers in the memo display.

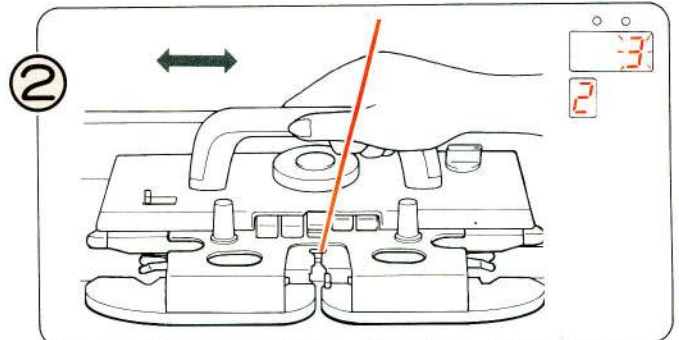
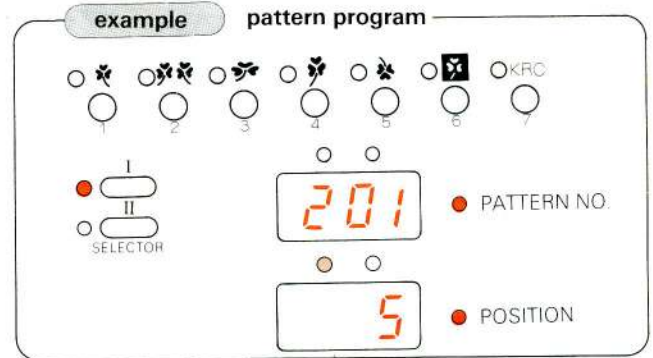
• <ex.> pattern no. 201



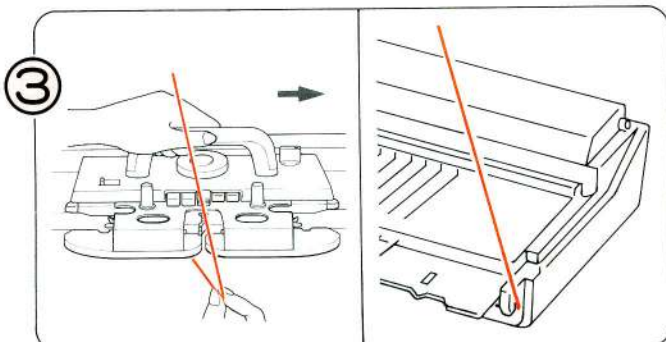
• pattern knitting



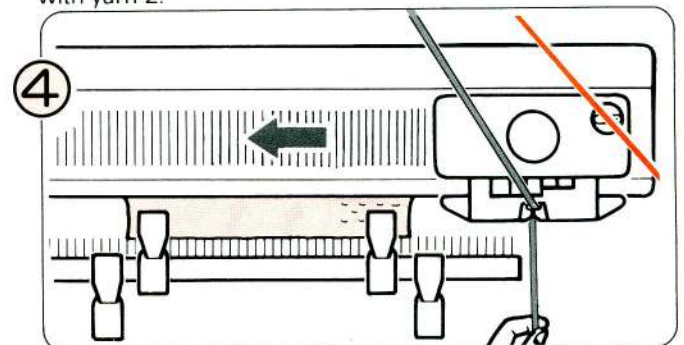
Thread the yarn 1 into the righthand yarn tension unit and the yarn 2 into the lefthand one. Follow the steps ② — ⑦ of skip stitch pattern (see page 74).



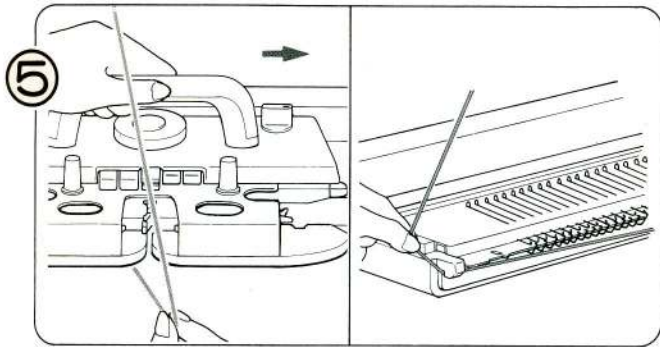
Move the K carriage back and forth until the number 2 appears in the memo display. Number 3 in the display and number 2 in the memo display tell you to knit the third row with yarn 2.



Take yarn 1 out of yarn feeder A. If you slide the K carriage slightly to the right the yarn can be removed easily. Hook yarn 1 around the notch at the end of your machine.

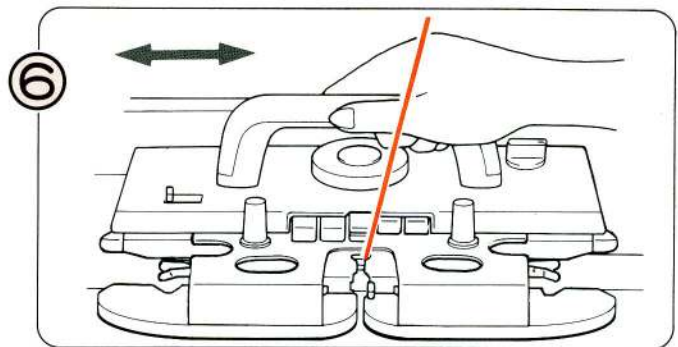


Thread yarn 2 into yarn feeder A and continue knitting until number 1 appears in the memo display.



Take the yarn 2 out of yarn feeder A and hook it around the notch at the end of your machine.

- ♣ Hook the yarn 1 around the notch at the right end of your machine and the yarn 2 around the notch at the left end.

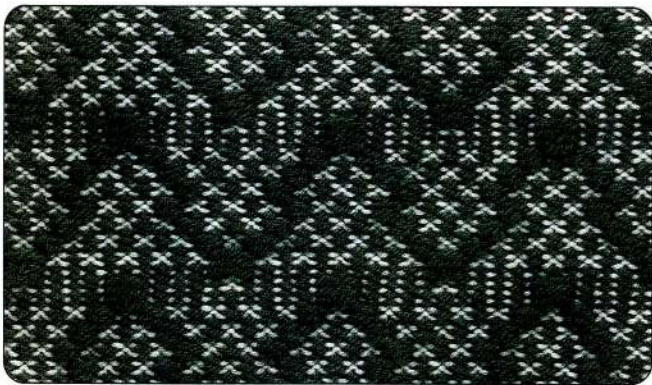


Continue knitting, changing the yarns according to the number in the memo display. (When you change the yarns, take care not to cross them over each other.)

- ♣ Rehang the claw weights every 10 rows or so.

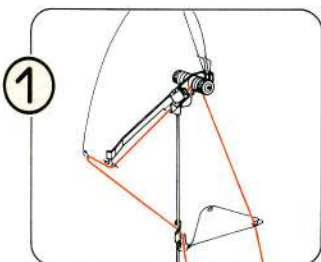
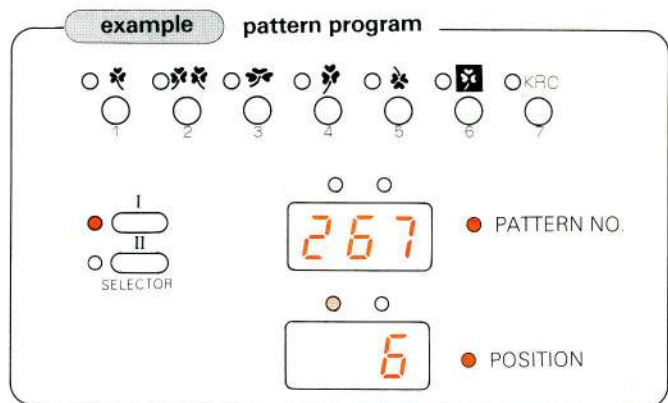
WEAVING PATTERN

- <ex.> pattern no. 267

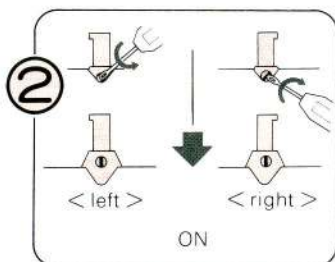


- pattern knitting

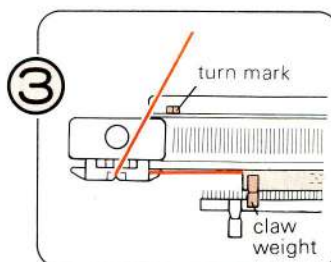
This example requires two types of yarn — the main yarn and the weaving yarn. A better effect will result if you choose a weaving yarn that is thicker than the main yarn.



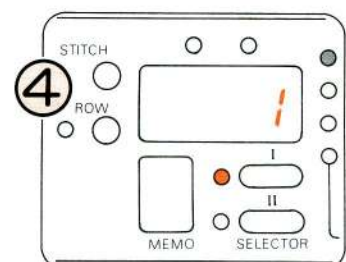
Thread the main yarn into the righthand yarn tension unit (see page 13).



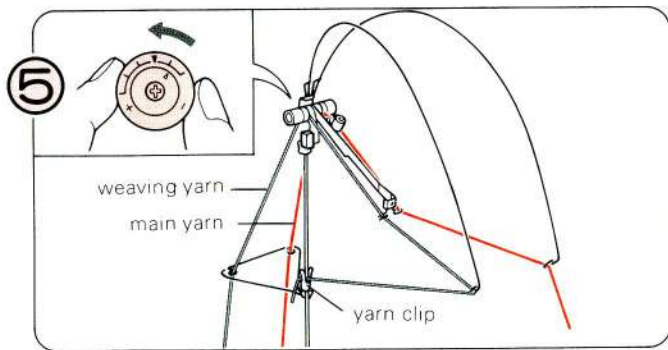
Set the end needle selection mechanism to ON (see page 12).



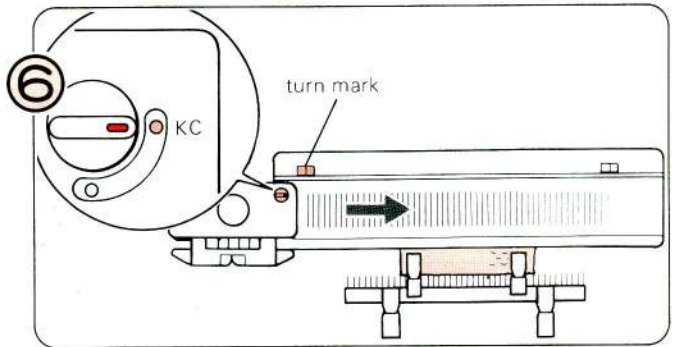
Knit a few rows in stocking stitch and place the K carriage outside the left turn mark.
Hang the claw weight evenly along the cast-on comb.



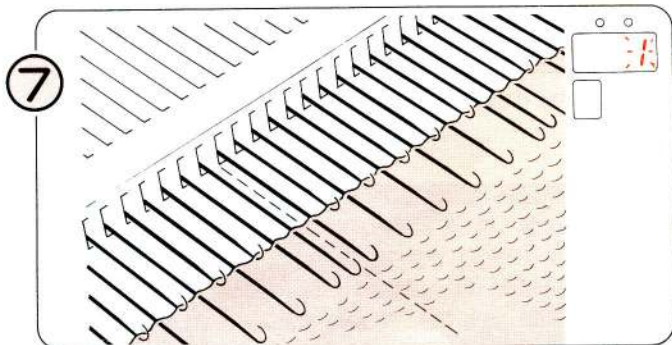
Program your pattern (see page 19).



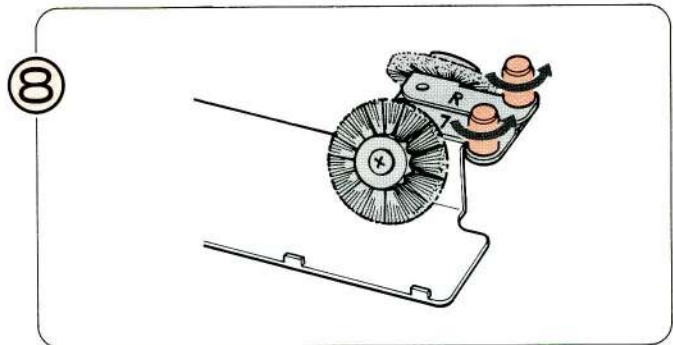
Thread the weaving yarn into the lefthand yarn tension unit.
 ♣ Adjust the tension disc as shown according to the weaving yarn.



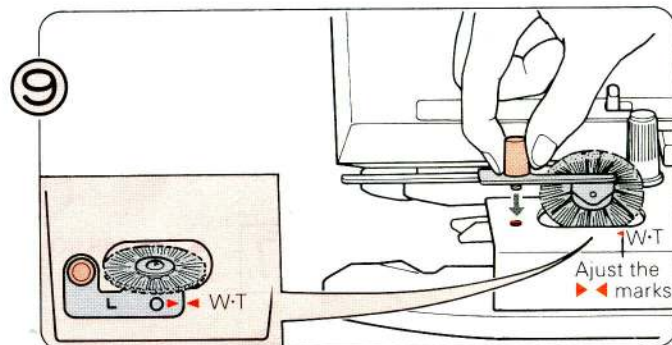
Set the change knob to KC.
 Move the K carriage from left to right across the left turn mark.
 ♣ You only need to operate the K carriage once across the turn mark when you start pattern knitting.



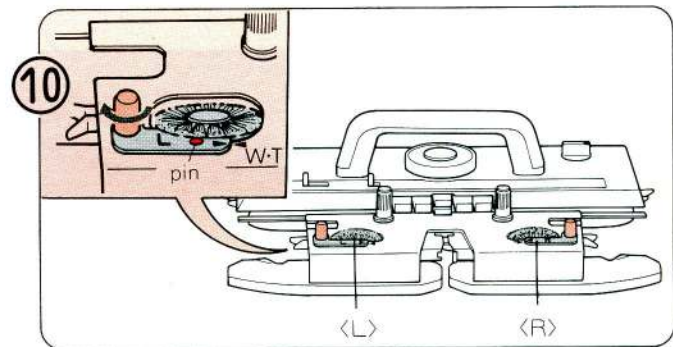
The needles are selected. Number 1 flashes on and off in the display to tell you to knit the first row of the pattern.



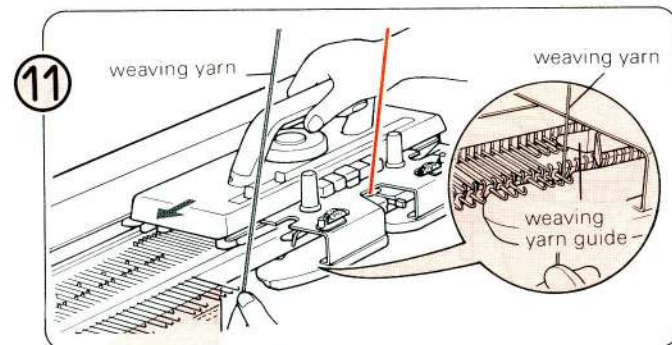
Remove the wheel brushes from the case.



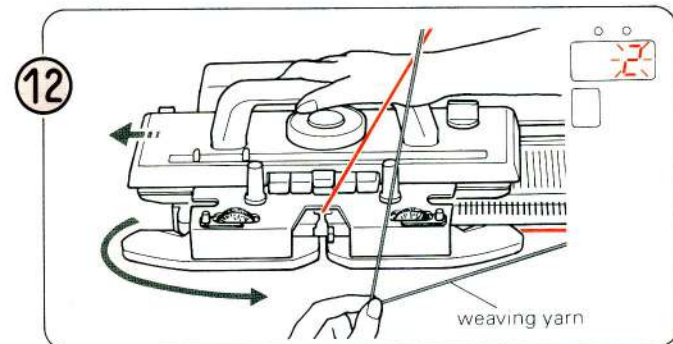
Put the wheel brush (L) into the left oval opening in the sinker plate and insert the screw.



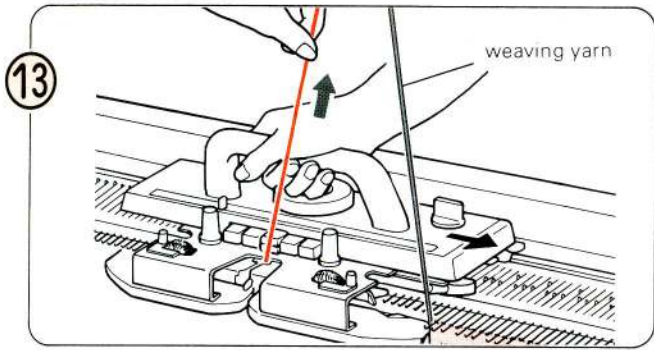
Locate the pin on the sinker plate into the hole of the wheel brush, and tighten screw.
 Fit the second brush on right.



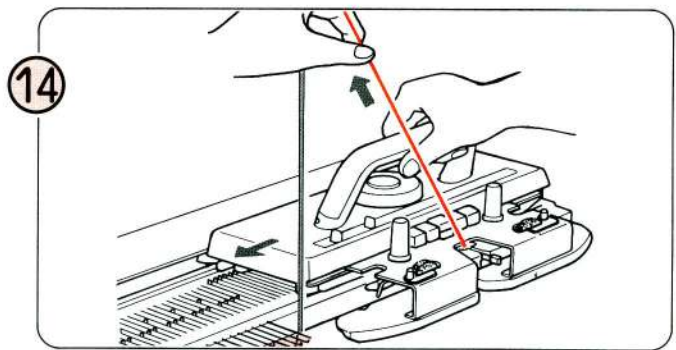
Hold the end of the weaving yarn with your hand, and thread it into the weaving yarn guide on the left side of the K carriage. Then move the K carriage across the needle bed.
 ♣ Release the yarn end after knitting one row.



Remove the weaving yarn from the left weaving yarn guide by moving the K carriage slightly to the left. Pass the weaving yarn under the K carriage to the righthand side.
 Number 2 in the display tells you to knit the second row of the pattern.



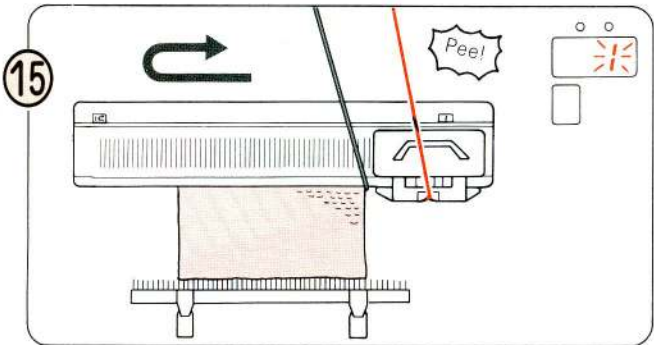
Move the K carriage to the right, pulling the main yarn upwards slightly — ensure that the weaving yarn is in the right weaving yarn guide.



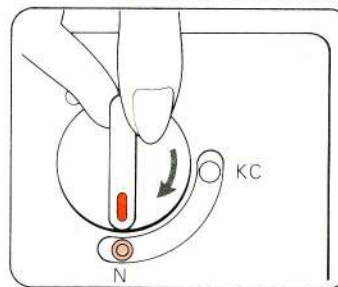
Continue knitting at the same time placing the weaving yarn into the left or right weaving yarn guide according to the direction of the K carriage, and pulling the main yarn upwards slightly.

♣ Rehang the claw weights every 10 rows or so.

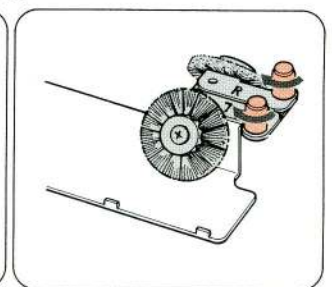
- You can either continue:
Repeat steps 14 — 15 .
- Or finish pattern knitting ...



Knit in pattern until you hear the sound "Peel!". If you are operating the K carriage from right to left when you hear the sound, finish that row and knit one more row. The number 1 flashes on and off in the display.



① Set the change knob to N.



② Remove the wheel brushes, and replace into case.

♣ While knitting in pattern, you must take the K carriage past the center of the machine (green 1 needle) on every row.

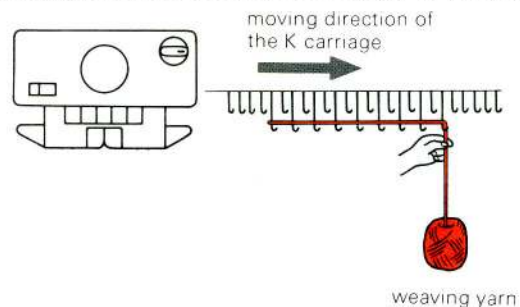
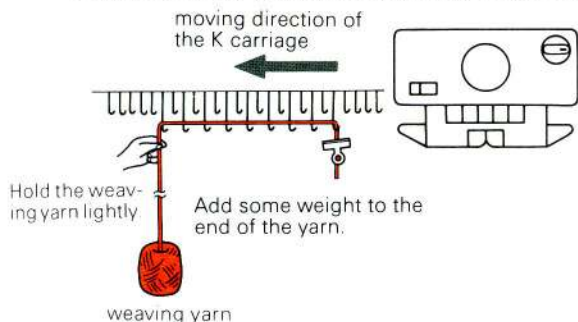
WHEN USING MORE THAN TWO WEAVING YARNS ...

Change the weaving yarns according to the number in the memo display.

There are two ways to weaves — one is to change the yarn in the yarn tension unit, and the other is to lay the weaving yarn across the needles by hand.

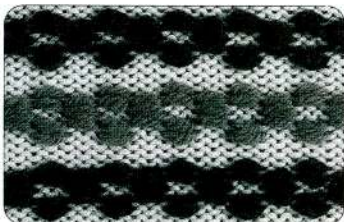
• Second method ...

Lay the weaving yarn across the selected needles, beginning from the same side as the K carriage, as illustrated.



HOW TO KNIT SOME ROWS WITH THE MAIN YARN ONLY

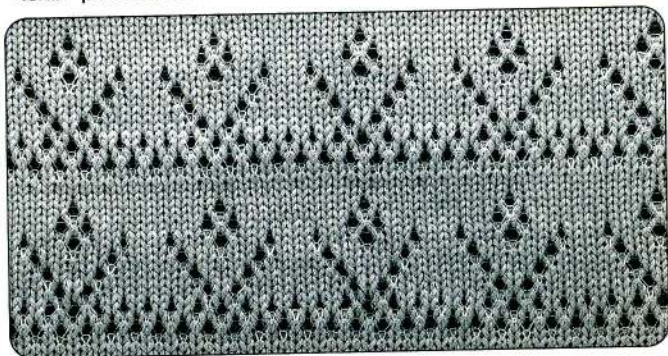
This example was knitted using pattern no. 257.



- When the number appears in the memo display, you should knit using the weaving yarn.
- When there is no number in the memo display, knit without the weaving yarn.

THREAD LACE PATTERN (SELECTOR I)

- <ex.> pattern no. 240

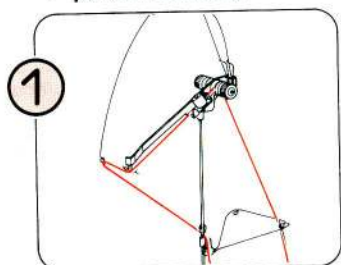


• Before starting pattern knitting

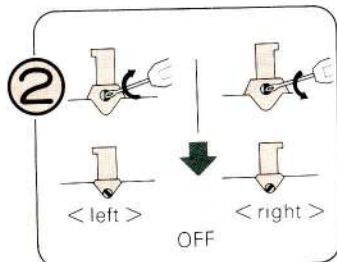
You can knit this pattern by using a combination of thick yarn and very fine yarn.

Use thick yarn as the main yarn, and very fine yarn in a similar colour to the main yarn, for the contrast.

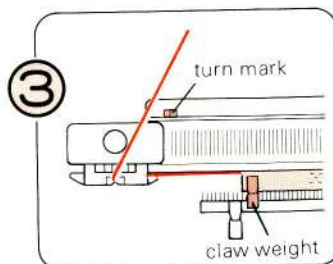
• pattern knitting



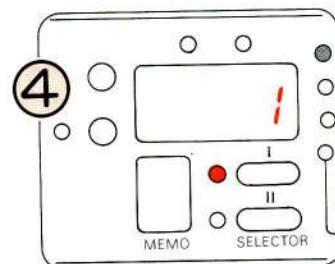
Thread the main yarn into the righthand yarn tension unit (see page 13).



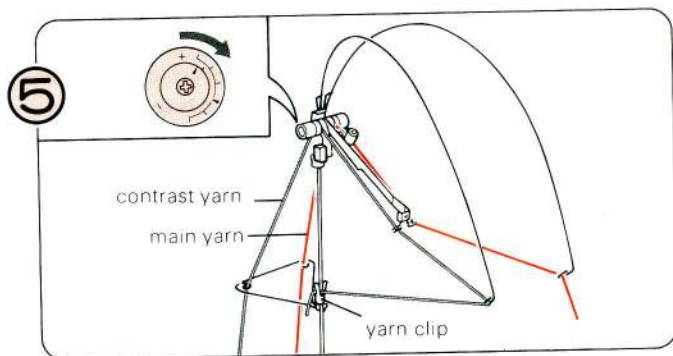
Set the end needle selection mechanism to OFF (see page 12).



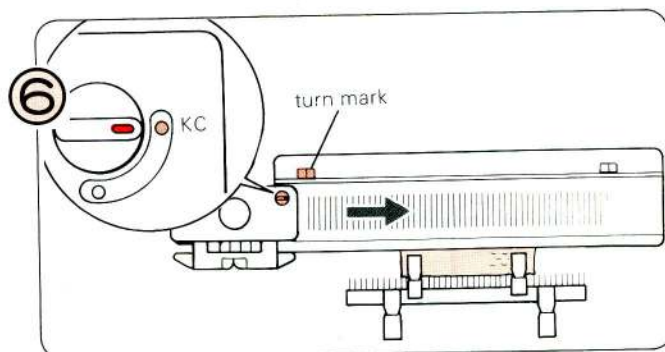
Knit a few rows in stocking stitch and place the K carriage outside the left turn mark. Hang the claw weight evenly along the cast-on comb.



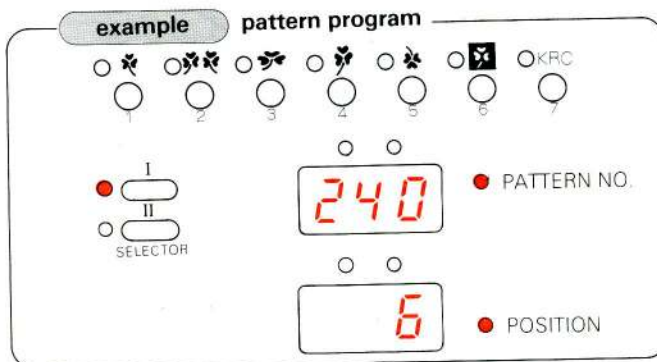
Program your pattern (see page 19).



Thread the very fine contrast yarn into the lefthand yarn tension unit. Adjust the tension disc to the thickness of the contrast yarn.

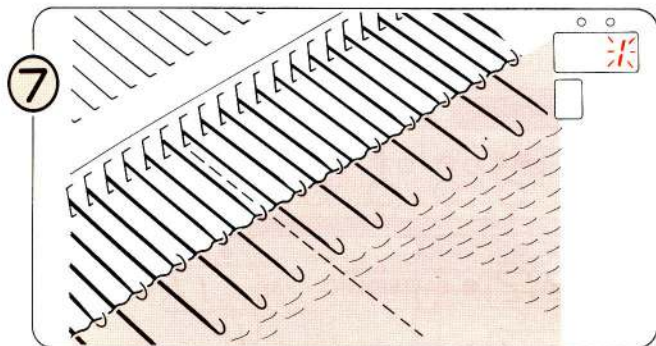


Set the change knob to KC. Move the K carriage from left to right across the left turn mark. ♣ You only need to operate the K carriage once across the turn mark when you start pattern knitting.

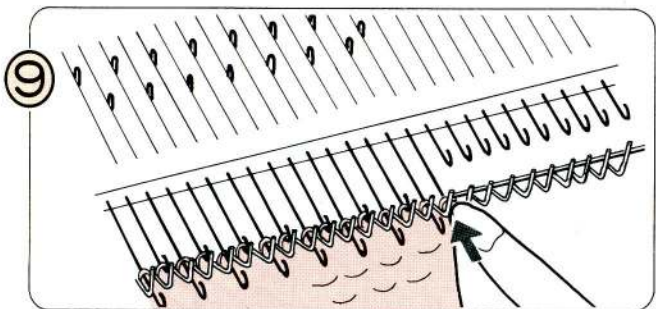


APPROXIMATE TENSION CHART

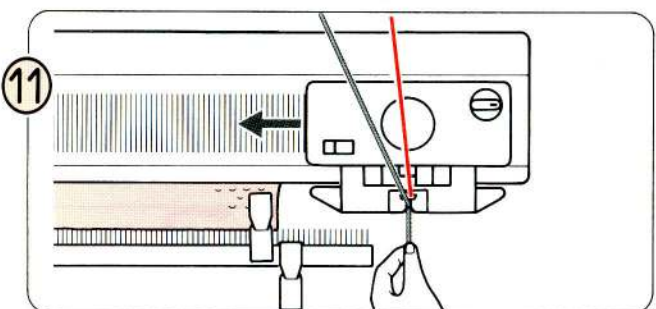
combination of the yarn		tension dial
thick yarn	very fine yarn	1 ~ 5
chunky yarn	very fine yarn	5 ~ 9



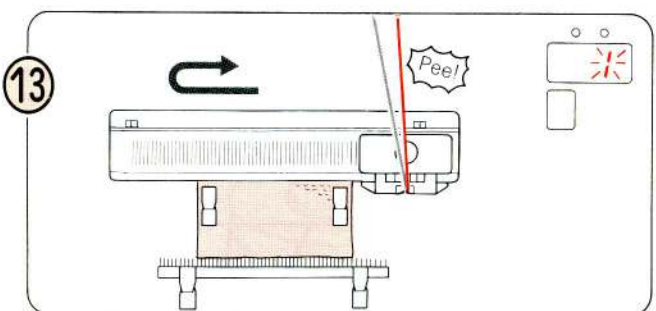
7 The needles are selected. Number 1 flashes on and off in the display to tell you to knit the first row of the pattern.



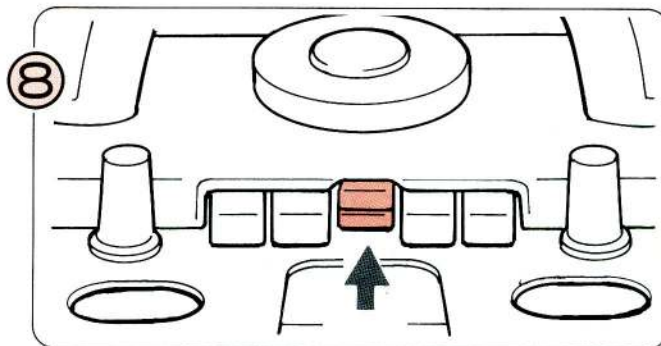
9 If an end needle is in D position, bring it back to B position.



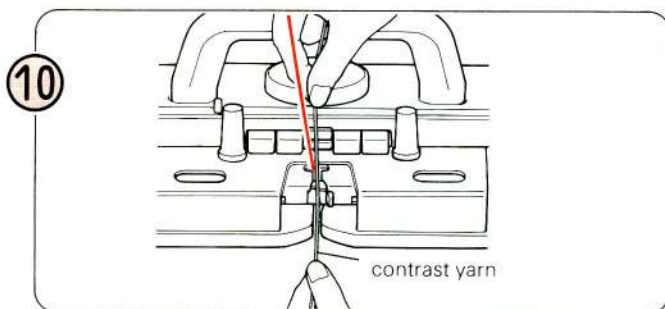
11 Knit a row with the K carriage, at the same time holding the yarn end with your hand.



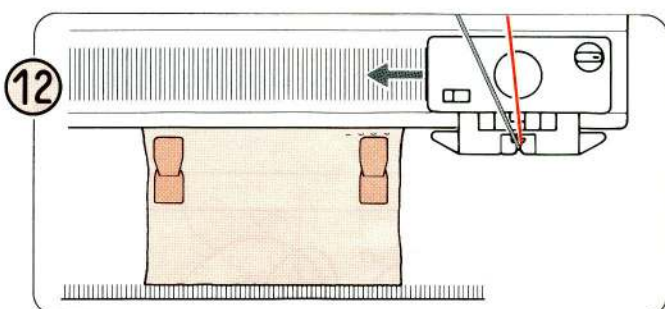
13 Knit in pattern until you hear the sound "Peel". If you are operating the K carriage from right to left when you hear the sound, finish the row and knit one more row. Number 1 flashes on and off in the display. You have now knitted one complete pattern in length.



8 Push both upper and lower buttons (L) at the same time. Set the tension dial using the tension chart on page 79 as a guide.



10 Thread the contrast yarn into yarn feeder B — there is no need to open the yarn feeder lever when you do so.

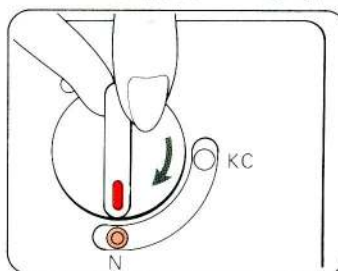


12 Continue knitting, remembering to bring the selected end needle back to B position (see step 9).

- ♣ Rehang the claw weights every 10 rows or so.
- ♣ Move the K carriage slowly.

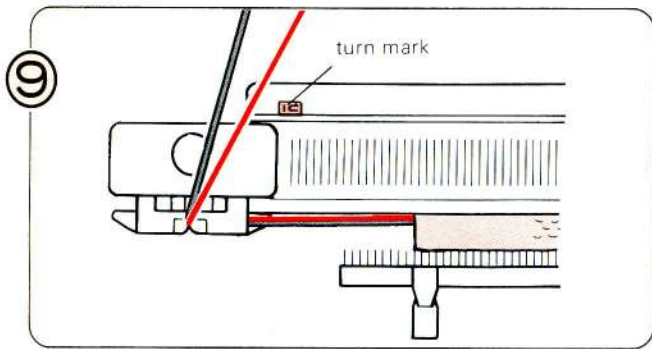
• You can either continue:
Repeat steps 12 — 13

• Or finish pattern knitting ...

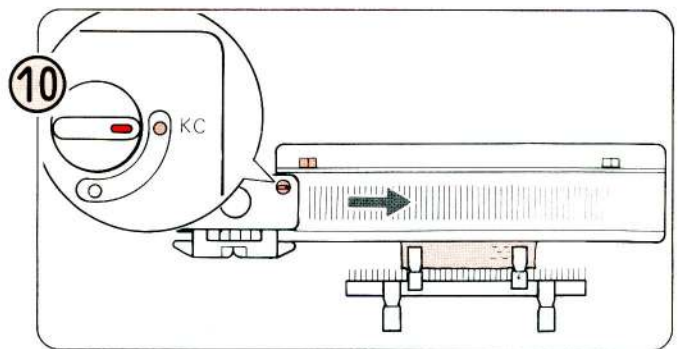


Set the change knob to N. The cam buttons will be released automatically.

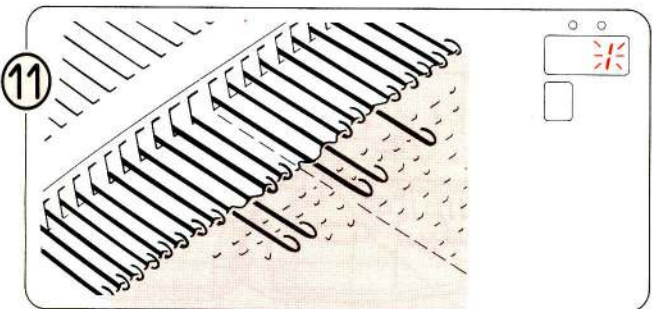
While knitting in pattern, you must take the K carriage past the center of the machine (green 1 needle) on every row.



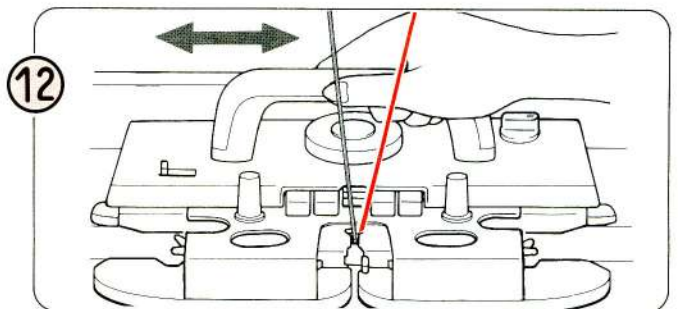
Continue knitting until you want to begin thread lace knitting. Place the K carriage outside the left turn mark.



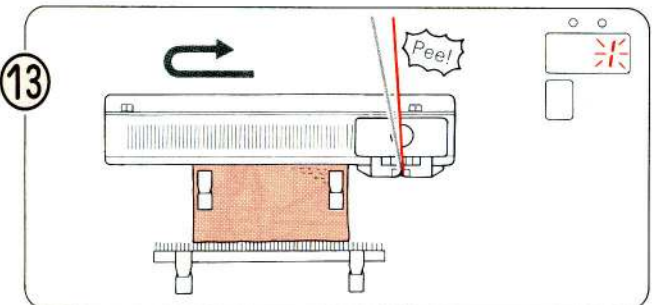
Set the change knob to KC. Move the K carriage from left to right across the left turn mark. ♣ You only need to operate the K carriage once across the turn mark when you start pattern knitting.



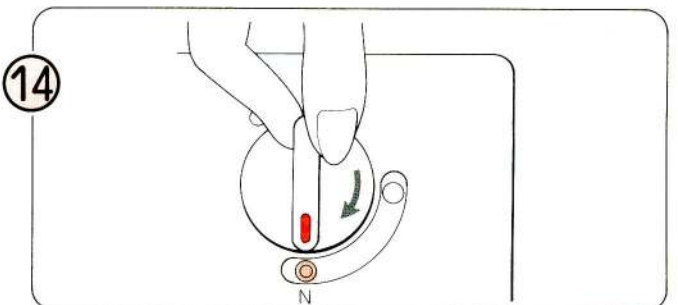
The needles are selected. Number 1 flashes on and off in the display to tell you to knit the first row of the pattern.



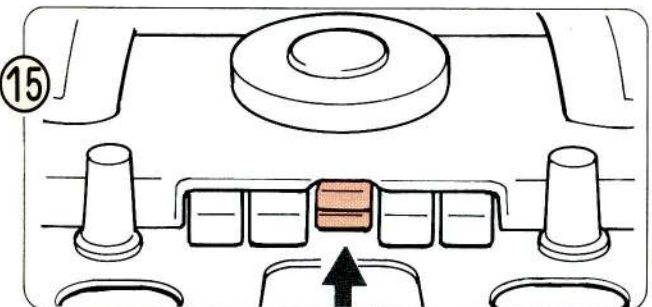
Move the K carriage back and forth. You are now knitting in thread lace pattern. The number in the display tells you the row you are going to knit next. ♣ Rehang the claw weights every 10 rows or so.



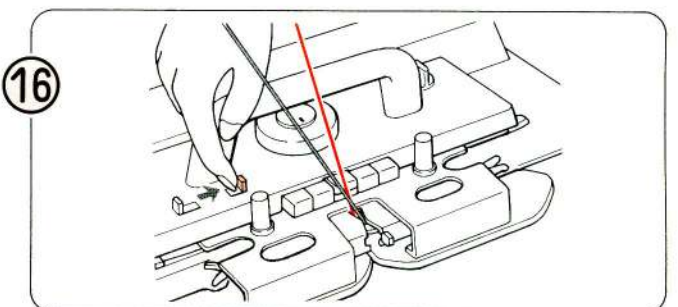
Knit in pattern until you hear the sound "Peel". If you are operating the K carriage from right to left when you hear the sound, finish the row and knit one more row. Number 1 flashes on and off in the display.



Set the change knob to N. The cam buttons will be released automatically.



Push both upper and lower buttons (L) at the same time, and continue knitting until you want to finish.



Slide the cam button release lever to the right to release the cam buttons.

♣ While knitting in pattern, you must take the K carriage past the center of the machine (green 1 needle) on every row.

PLATING

With the plating yarn feeder, you can use two yarns to knit a reversible fabric, with one colour on the right side and the other on the wrong side. The main yarn will be on the front (plain) side of the knitting and the plating yarn will be on the reverse (purl) side.

The setting for the K carriage is the same as for stocking stitch.



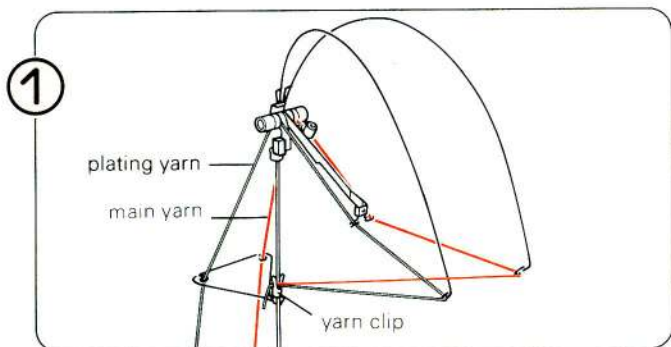
Front (Plain)



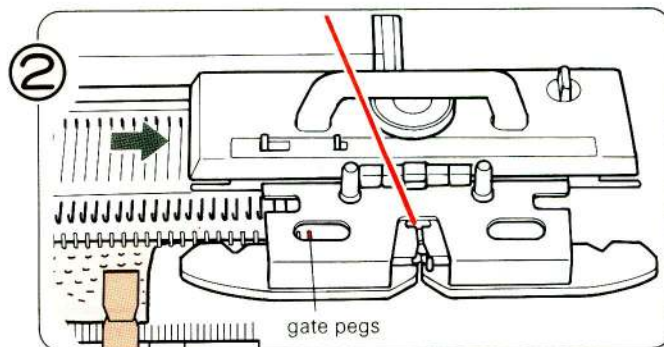
Reverse (Purl)

APPROXIMATE TENSION CHART

combination of the yarns		tension dial
medium	medium	2 ~ 6
medium	thick	4 ~ 8
thick	thick	6 ~ 10
chunky	medium	6 ~ 10

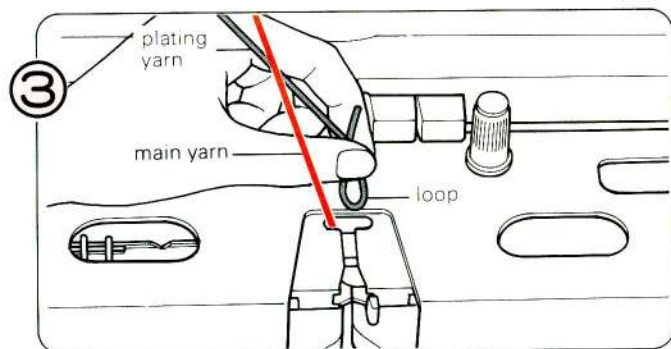


Thread the yarns into the yarn tension unit as shown.

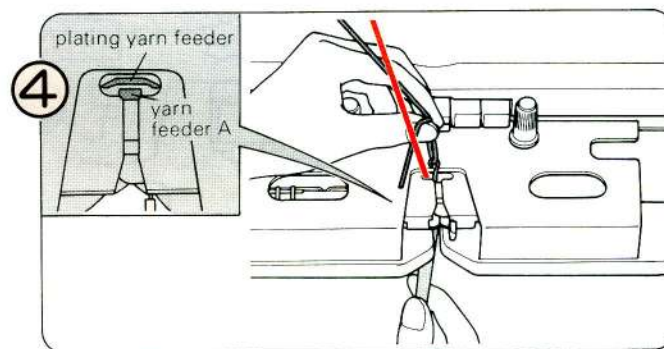


Thread the main yarn into the yarn feeder A. Knit a few rows in stocking stitch and place the K carriage on the right side of the machine. Move the K carriage outside the gate pegs.

♣ Rehang the claw weights onto the edge of the knitting.

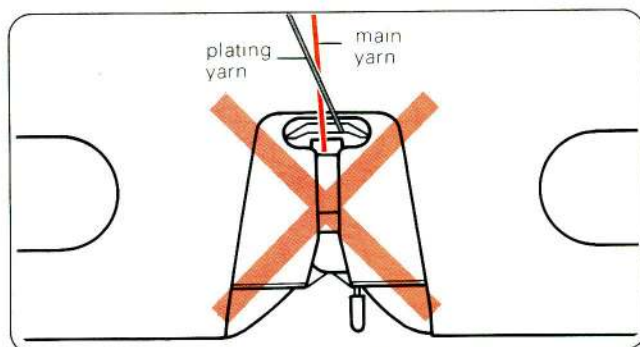


Pass the plating yarn behind the main yarn.

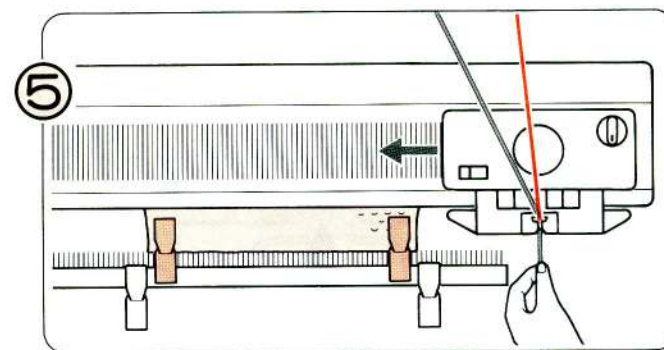


Thread the plating yarn in the plating yarn feeder.

♣ Pull down the yarn by using the latchet tool.



Make sure the two yarns are not crossed.



Hold the end of the plating yarn with your left hand, and move the K carriage to the left. Once the needles have caught the yarn, you can release the yarn end. Continue knitting in this way. You are now knitting plating.

♣ Rehang the claw weights every 10 rows or so.

PLATING

With the plating yarn feeder, you can use two yarns to knit a reversible fabric, with one colour on the right side and the other on the wrong side. The main yarn will be on the front (plain) side of the knitting and the plating yarn will be on the reverse (purl) side.

The setting for the K carriage is the same as for stocking stitch.



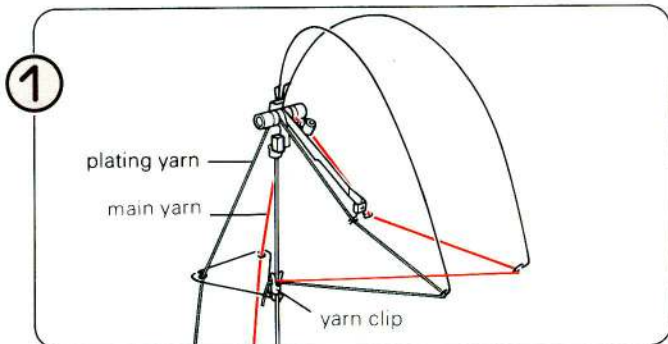
Front (Plain)



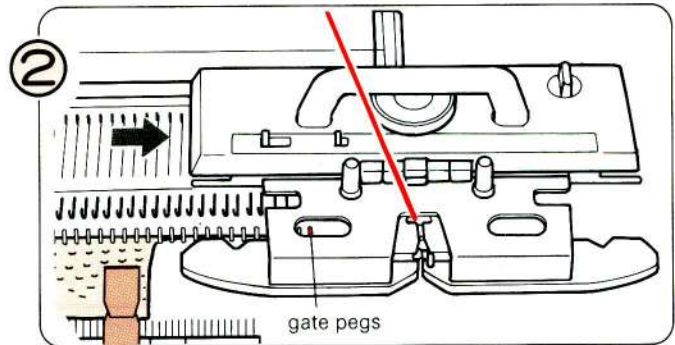
Reverse (Purl)

APPROXIMATE TENSION CHART

combination of the yarns		tension dial
medium	medium	2 ~ 6
medium	thick	4 ~ 8
thick	thick	6 ~ 10
chunky	medium	6 ~ 10

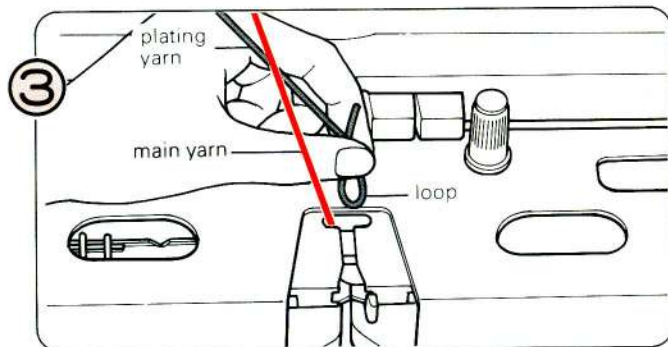


Thread the yarns into the yarn tension unit as shown.

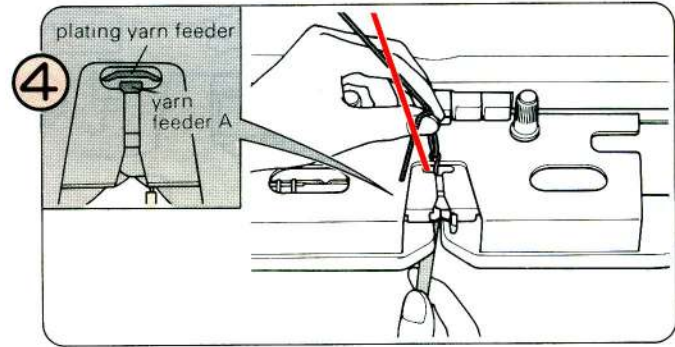


Thread the main yarn into the yarn feeder A. Knit a few rows in stocking stitch and place the K carriage on the right side of the machine. Move the K carriage outside the gate pegs.

♣ Rehang the claw weights onto the edge of the knitting.

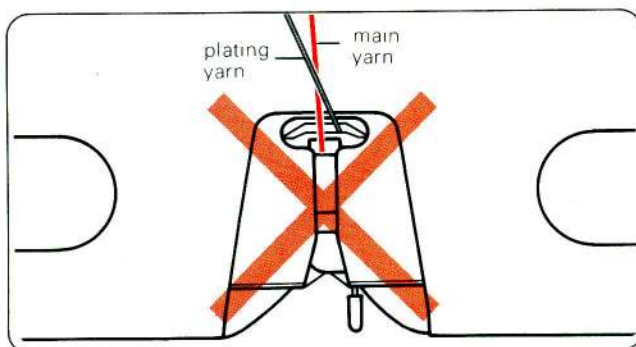


Pass the plating yarn behind the main yarn.

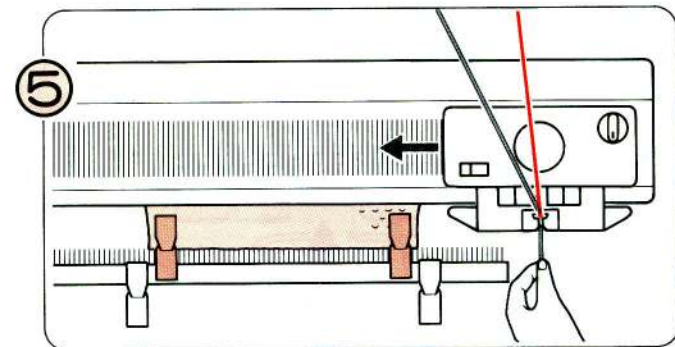


Thread the plating yarn in the plating yarn feeder.

♣ Pull down the yarn by using the latchet tool.



Make sure the two yarns are not crossed.



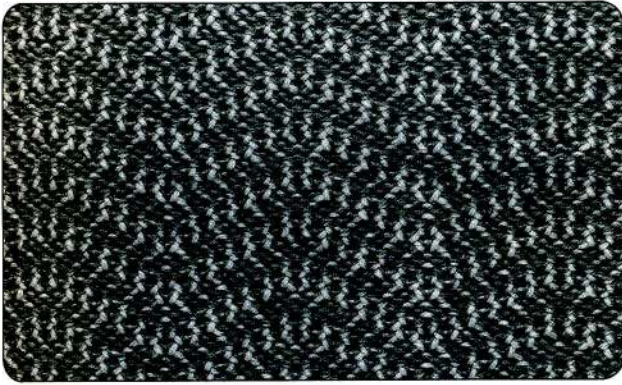
Hold the end of the plating yarn with your left hand, and move the K carriage to the left. Once the needles have caught the yarn, you can release the yarn end. Continue knitting in this way. You are now knitting plating.

♣ Rehang the claw weights every 10 rows or so.

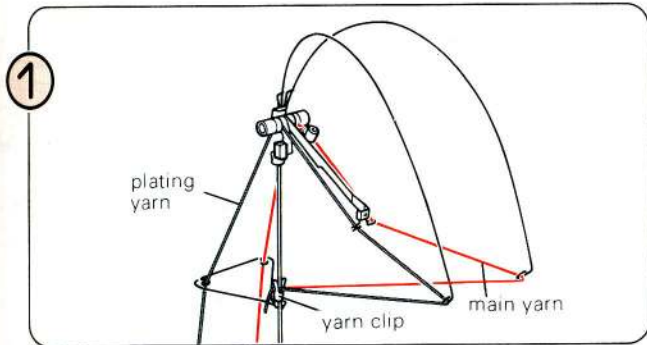
PLATED TUCK STITCH PATTERN

This is knitted the same as tuck stitch pattern, using the plating yarn feeder.

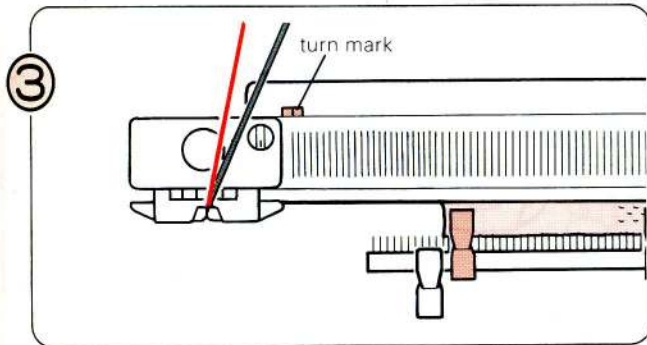
- <ex.> pattern no. 153



• pattern knitting

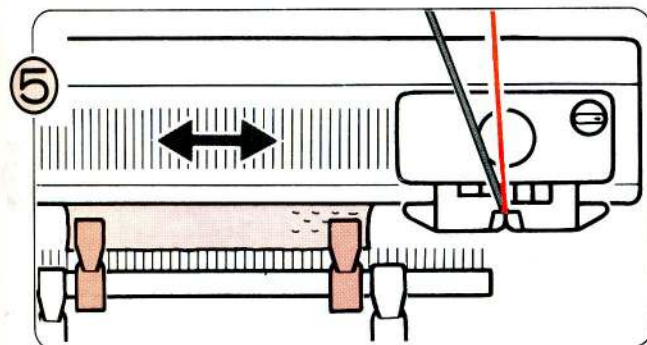


Thread the yarns as shown above.



After knitting several rows in plating, place the K carriage outside the left turn mark.

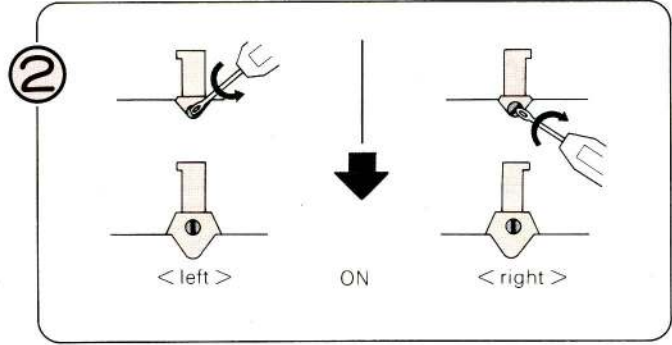
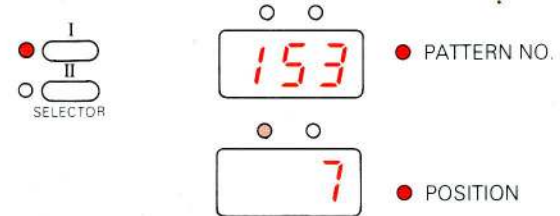
- ♣ Hang the claw weights onto the edge of the knitting.



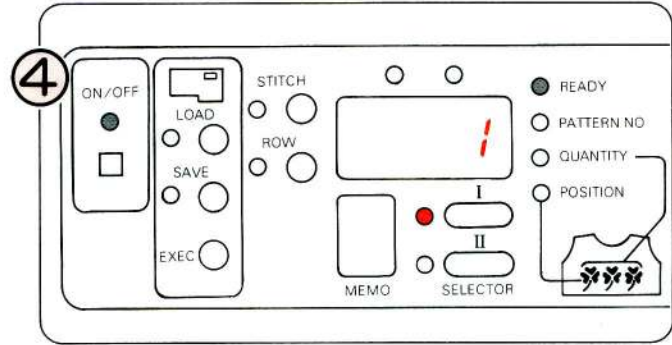
Continue knitting, following instructions for tuck stitch pattern (see steps ② — ⑬ on pages 70—71).

- ♣ Rehang the claw weights every 10 rows or so.

example pattern program



Set the end needle selection mechanism to ON (see page 12).



Program your pattern (see page 19).

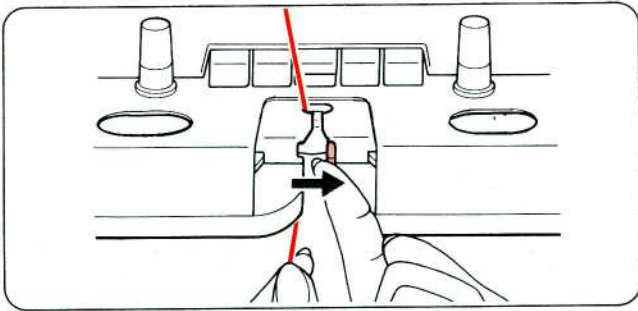
- ♣ You may not knit plated tuck according to the thickness or the material of the yarn.

USEFUL HINTS

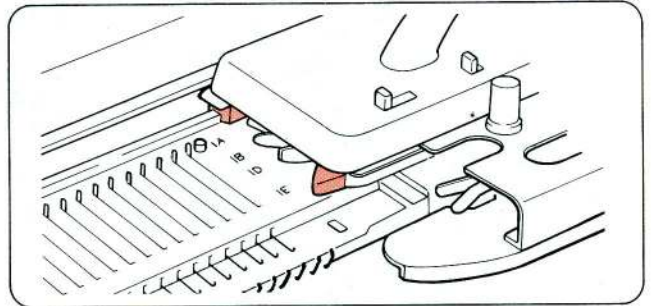
PROBLEMS DURING KNITTING

● WHAT TO DO WHEN YOU CANNOT KNIT STOCKING STITCH SMOOTHLY

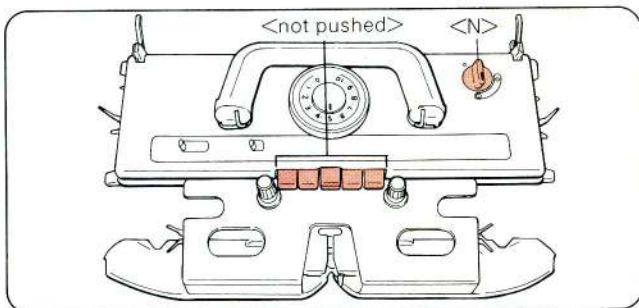
1. When the needles do not catch the yarn properly



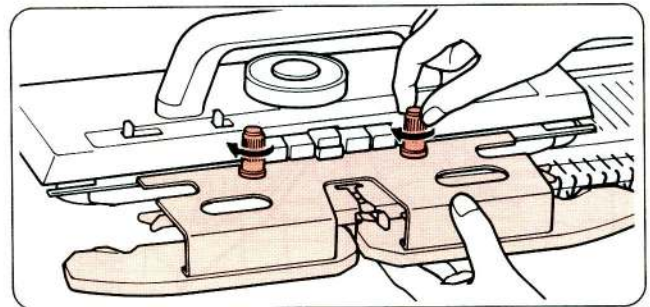
- Is the yarn correctly located in the yarn feeder A?
- Is the yarn feeder lever closed?



- Is the K carriage set correctly on the needle bed?



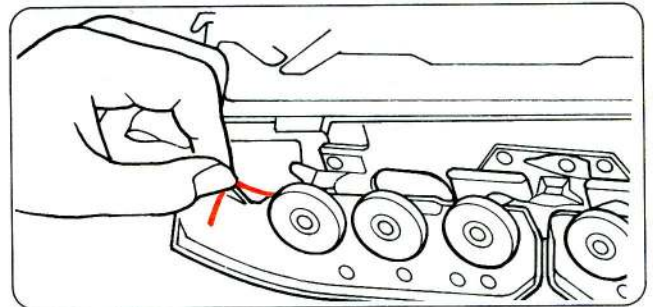
- Is the change knob set to N?
- Has any cam button been pushed in?



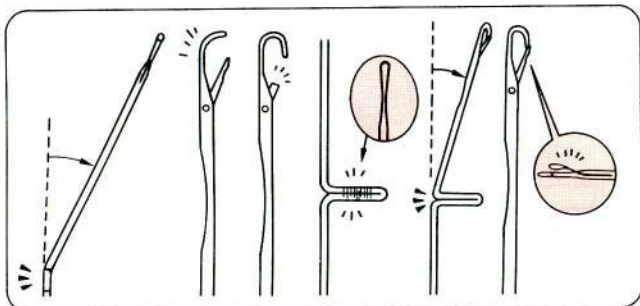
- Is the sinker plate assembly joined correctly to the K carriage?

2. When the K carriage is hard to push back and forth

- Make sure that the tension dial and tension disc are adjusted according to the thickness of your yarn. (tension dial — see page 10, tension disc — see page 13).
- Make sure that the machine is not damaged or dirty (see the rearside of the K carriage also).
- If the machine needs oiling or cleaning, (see page 119).
- Make sure you have threaded the yarn correctly into the yarn tension unit (see page 13).
- Make sure the yarn is flowing freely from the cone or ball.
- Make sure the wheel brushes are rotating freely. If there is yarn wrapped around these, you must remove it.



3. When stitches are not formed correctly

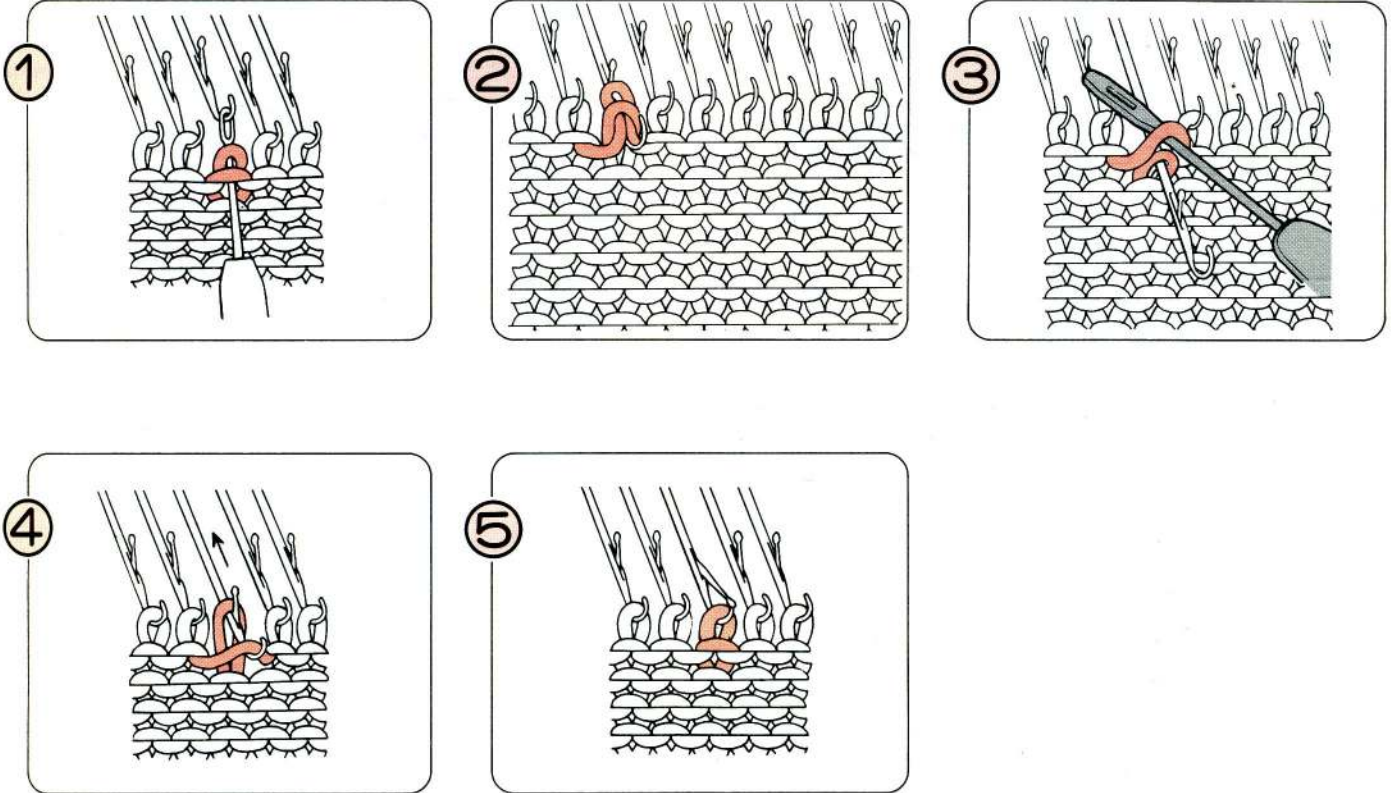


- Is the needle bent? If so, change it for a new one (see page 118).
- Place the rubber wheels into working position (see page 16).

4. How to pick up a dropped stitch

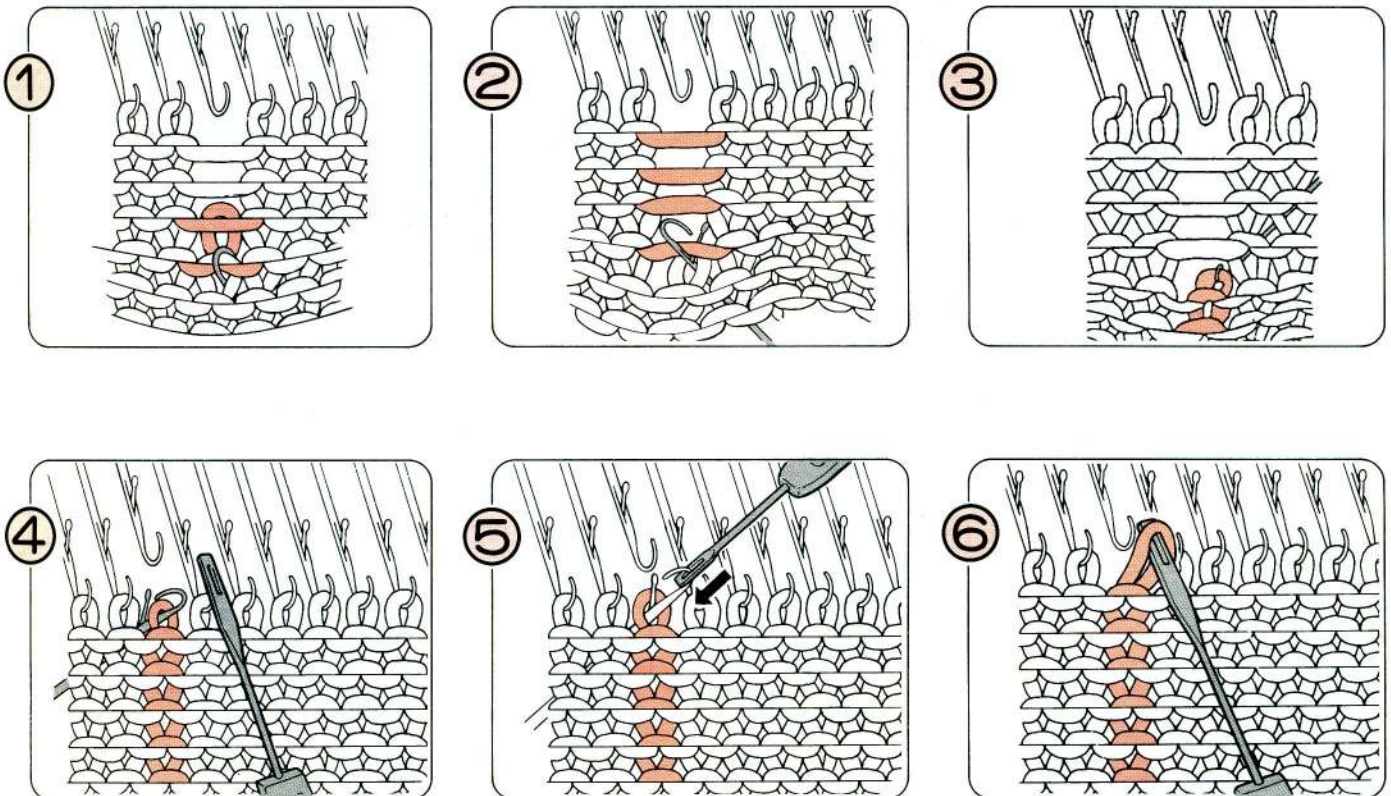
• Repairing a dropped stitch

Insert the transfer tool into the stitch on the row below the dropped stitch. Remake the dropped stitch as illustrated.



• Repairing a stitch that has dropped several rows

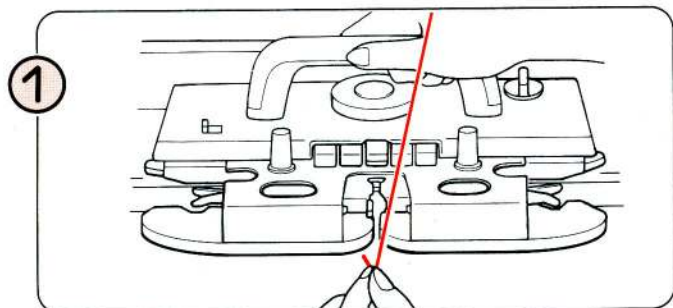
Use the latchet tool from behind, and hook up the bottom stitch. Remake the dropped stitches row by row. On the final row, transfer the stitch from the latchet tool to a transfer tool, and replace it onto the needle.



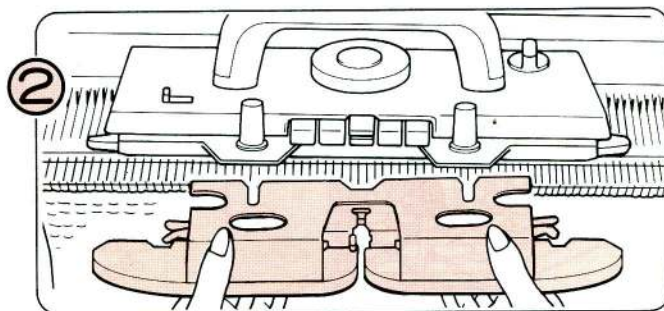
● WHAT TO DO IF YOU MAKE MISTAKES AS YOU KNIT STOCKING STITCH AND PLATING

1. If the K carriage should jam

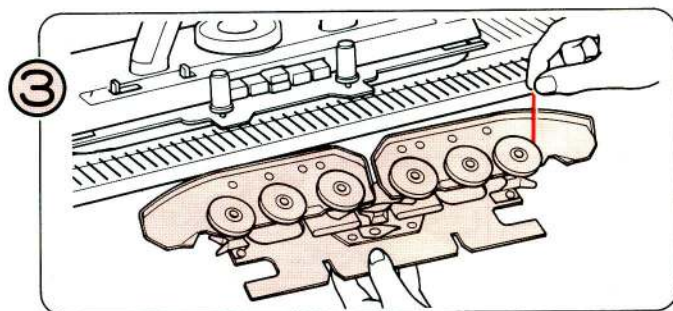
- Do not attempt to move the K carriage by force. Proceed as follows:



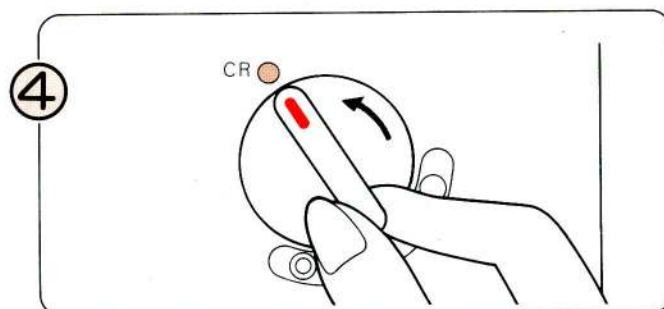
Take the yarn out of the yarn feeder.



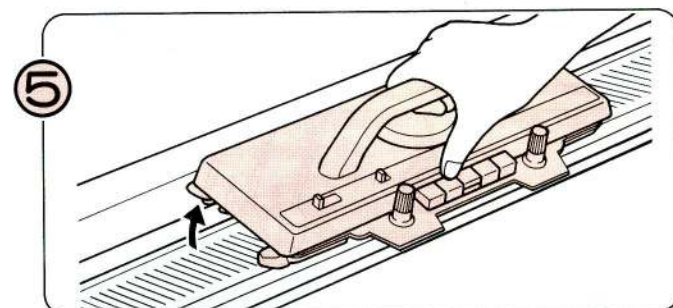
Loosen the knobs and remove the sinker plate assembly.



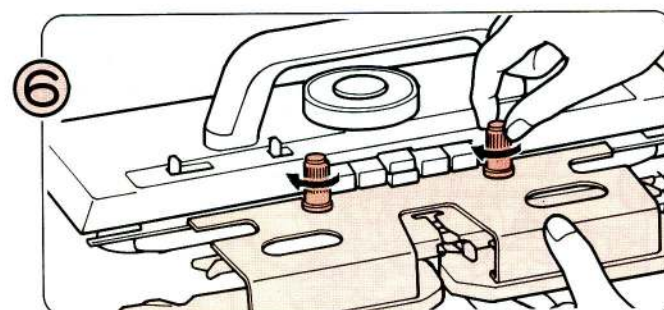
Untangle any yarn that has become wrapped around the wheels.



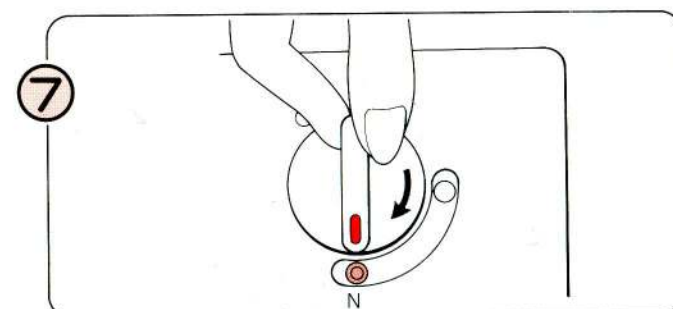
Set the change knob to CR to release the K carriage from the machine.



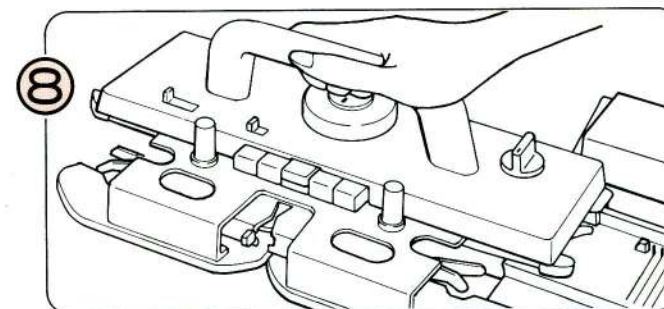
Lift up the K carriage towards you and remove it from the needle bed.



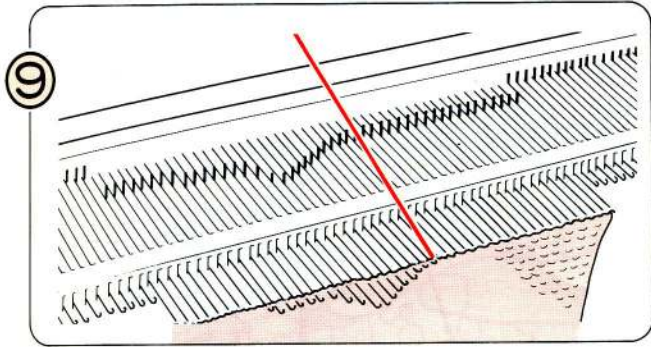
Screw the sinker plate assembly back onto the K carriage.



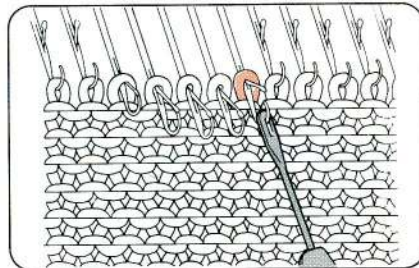
Return the change knob to N.



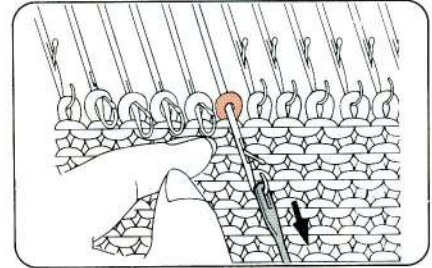
Slide the K carriage across onto the needle bed and check it is placed correctly.



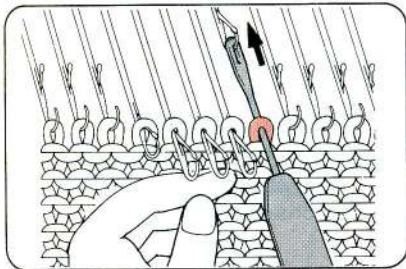
Using your transfer tool, replace any stitches that are on the stems of the needles back into the hooks, so that they will not drop off. (The following steps illustrate this technique.)



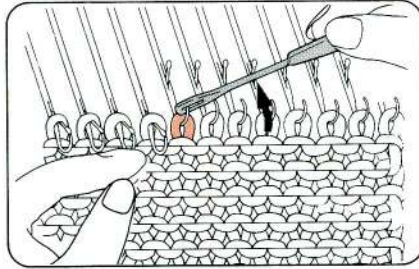
(1) Place the eye of the transfer tool into the hook of the needle.



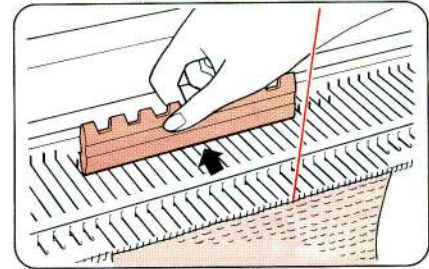
(2) Hold the transfer tool and pull it in line with the needle towards you.



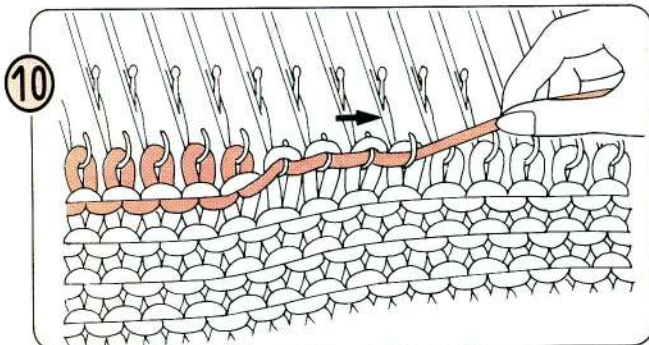
(3) Push the transfer tool away from you towards the machine until the stitch is on the transfer tool.



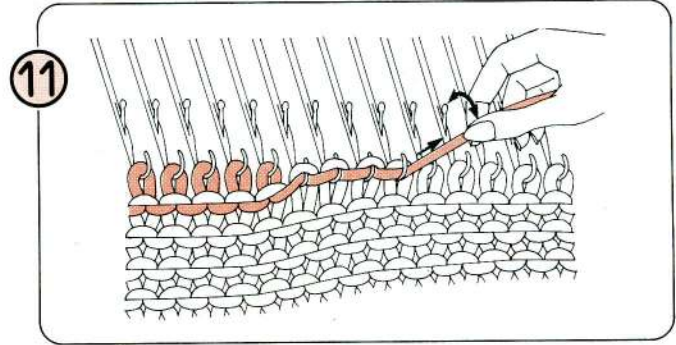
(4) Transfer the stitch into the hook of the needle.



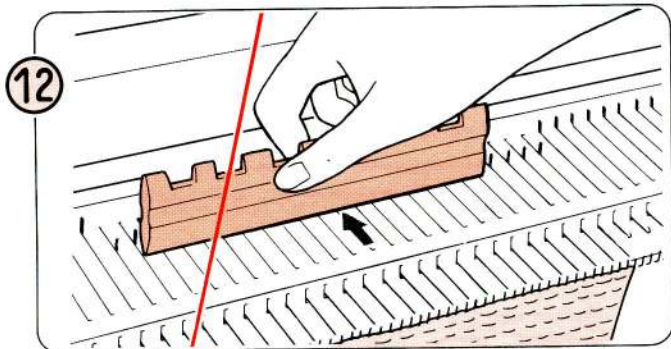
(5) When all the stitches are safely in the hooks of the needles, align all needles in B position using the flat edge of the needle pusher.



Pull the yarn sideways slightly so that it becomes tight in the needle hooks.

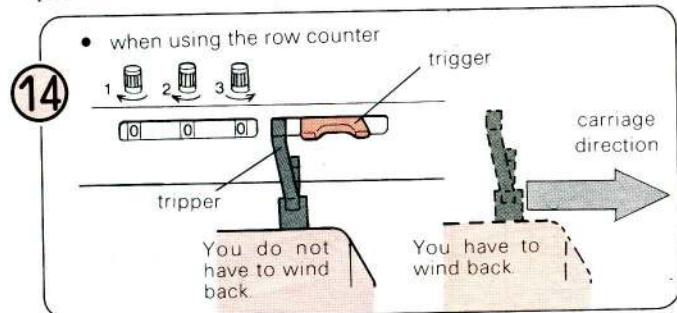


Now pull the yarn in an upwards direction to unravel the knitting. The stitches are undone and those from the row below will slip into the needle hooks. Work a few stitches at a time and repeat steps 10 and 11 across the row.



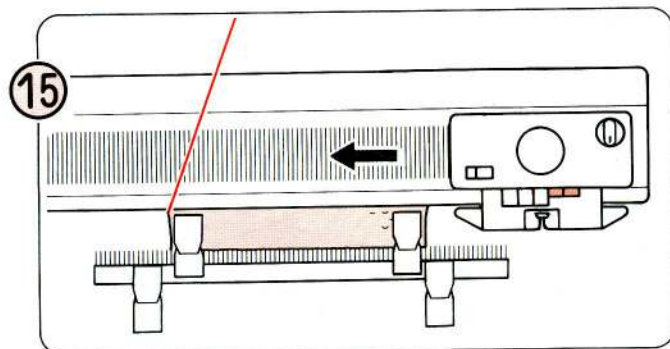
After unravelling a row check that all the stitches are in the needle hooks.

Using the flat side of the needle pusher, align the needles in B position.

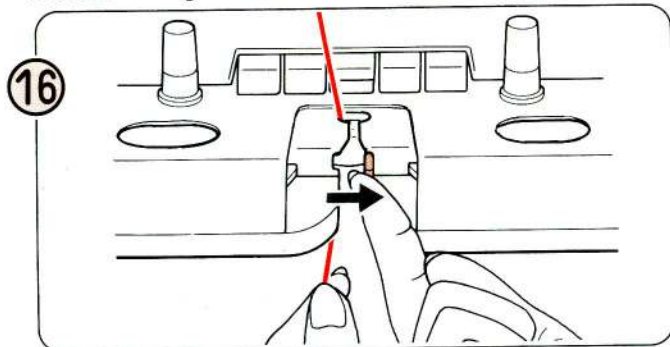


Wind back the row counter and knit leader (if used) by the number of rows you have unravelled.

(You do not need to count the last row if the tripper did not operate e.g. if you made the mistake before the K carriage had passed the triggers.)

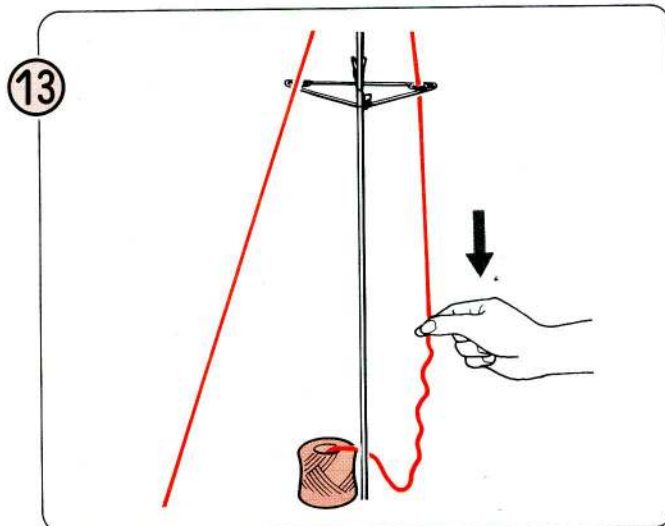


If the yarn is now on the opposite side of the knitting to the K carriage, you can move the K carriage across the needles without knitting as follows:



Thread up the yarn into the yarn feeder A.

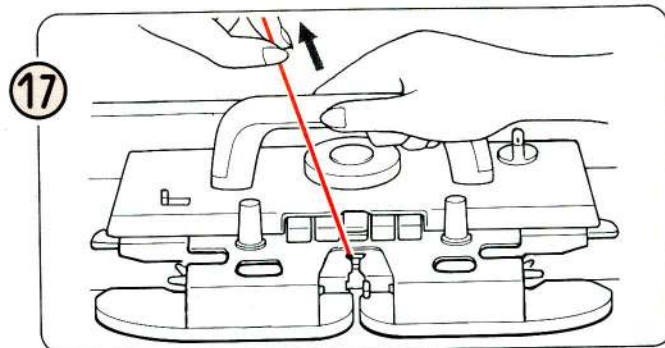
♣ Put the row counter and/or knit leader trippers back in operation.



Pull down the loose unraveled yarn from behind the rear yarn guide.

♣ To unravel several rows of knitting, repeat steps 10 — 12.

- (1) Make sure all the needles are in B position.
- (2) Push both part buttons.
- (3) If you are using the row counter or the knit leader, set their trippers to non working position.
- (4) Move the K carriage across to the other side of the needle bed.
- (5) Cancel both part buttons by sliding the cam button release lever.



Continue knitting with the K carriage, pulling the yarn slightly on the first row to remove any slackness.

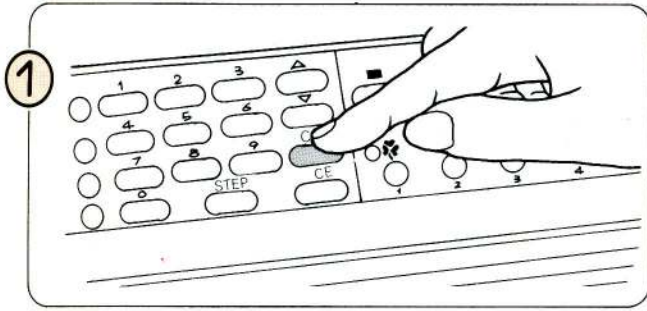
2. If you want to unravel some knitting.

If you wish to unravel a row or rows of knitting, for example if you find you have knitted too many, follow steps 10 — 17 above.

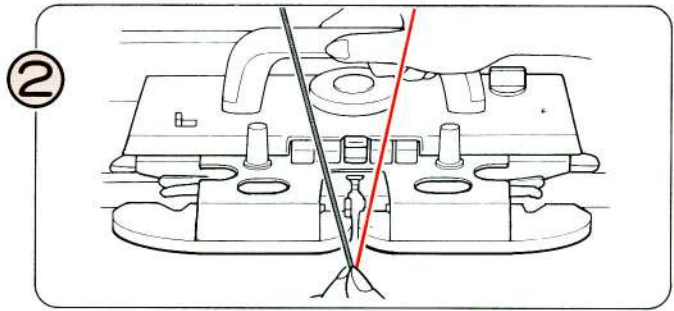
● WHAT TO DO IF YOU MAKE MISTAKES AS YOU KNIT PATTERN KNITTING

1. If the K carriage should jam

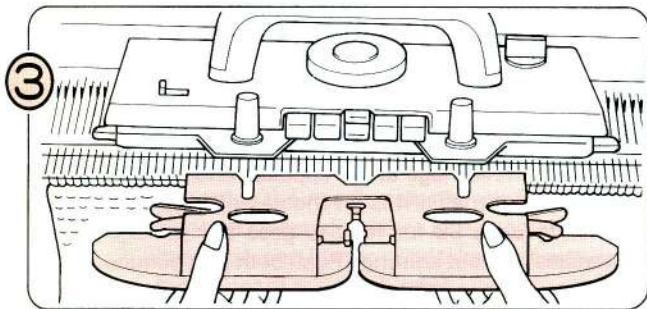
- Do not attempt to move the K carriage by force. Proceed as follows:



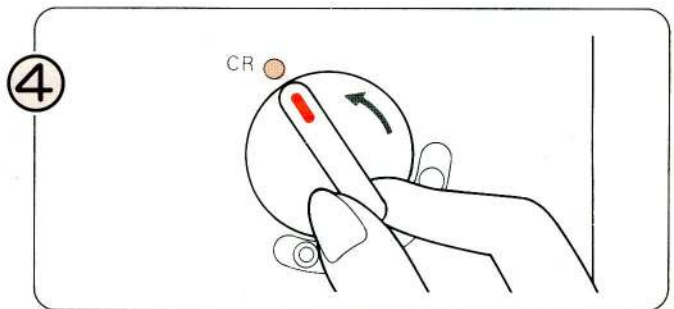
Push the CR key. The ready lamp flashes on and off.



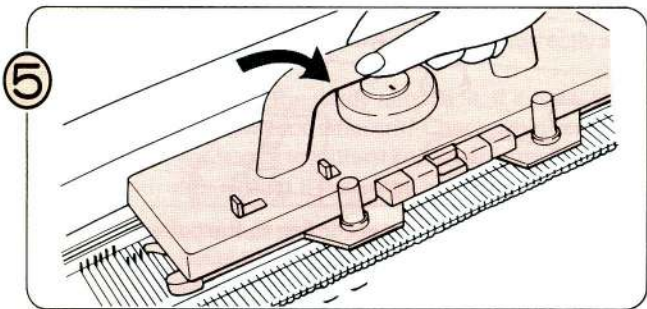
Take the yarn out of the yarn feeder.



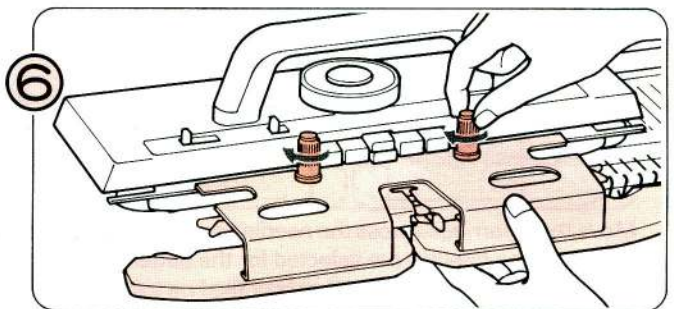
Loosen the knobs and remove the sinker plate assembly.



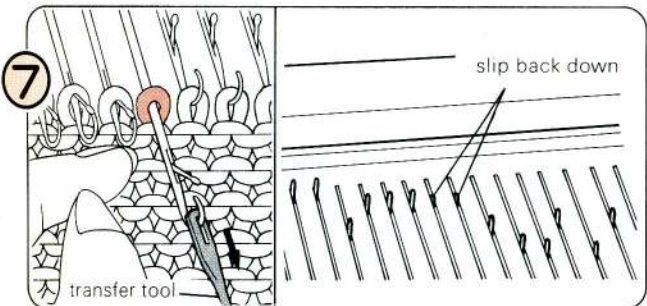
Set the change knob to CR to release the K carriage from the machine.



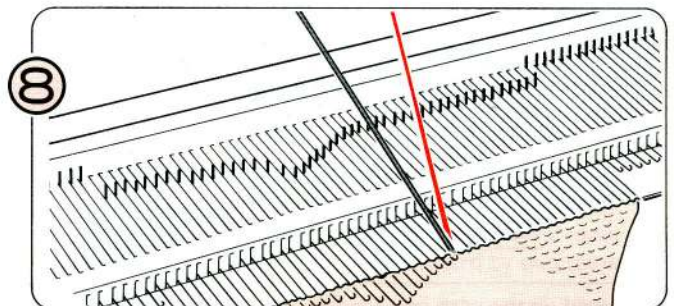
Lift up the K carriage towards you and remove it from the needle bed. Set the change knob to N.



Screw the sinker plate assembly back onto the K carriage.

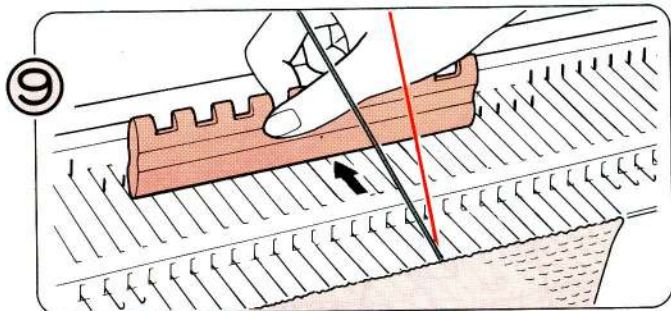


If some needles have slipped back down, pull the needle towards you using the transfer tool.

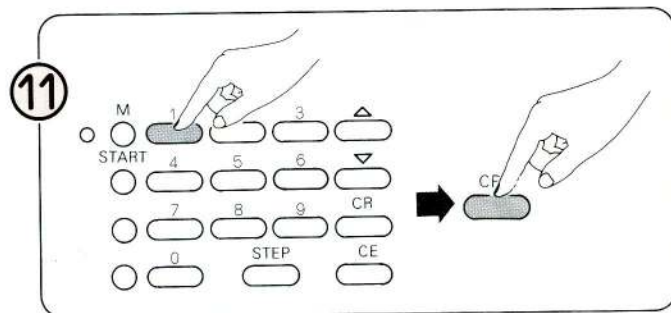


Using your transfer tool, replace any stitches that are on the stems of the needles back into the hooks, so that they will not drop off. (Refer to step ⑨ (1) — (5) on page 88.)



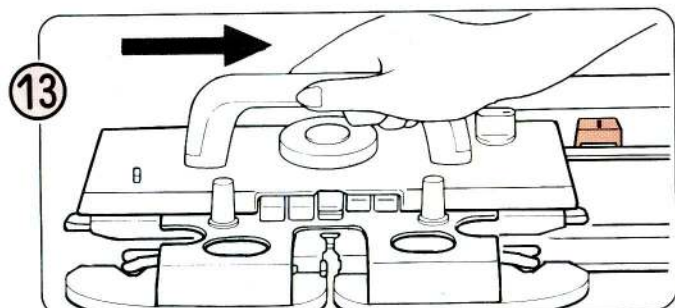


When all stitches are safely in the hooks of the needles, align all needles in B position using the flat edge of the needle pusher.



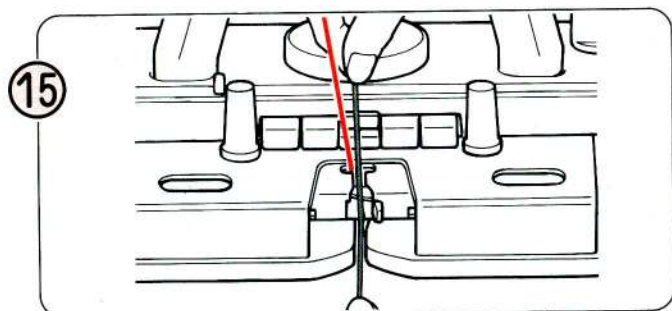
Enter the number of rows you have unravelled and push the CR key. The ready lamp is lit and the row number you are going to knit appears in the display.

- ♣ Don't forget to wind back the row counter and knit leader (if used) by the number of rows you have unravelled.
- ♣ You don't need to count the last row if the tripper didn't operate e.g. if you made the mistake before the K carriage had passed the triggers.



Move the K carriage across the needle bed to the same side as the yarn. The needles are selected for the pattern.

- ♣ If you are using the row counter or the knit leader, set their trippers to non-working position.



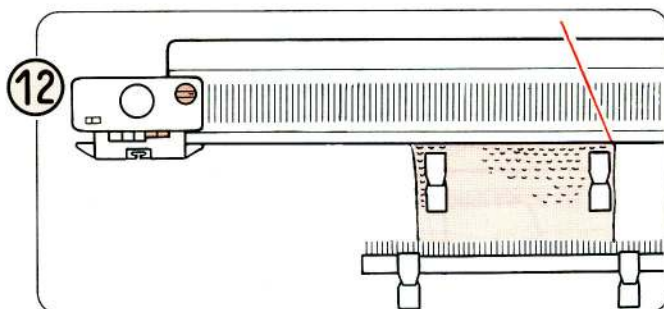
Thread up the yarn into feeder.

- ♣ If you are using contrast yarn or weaving yarn, don't forget to thread this up as well.

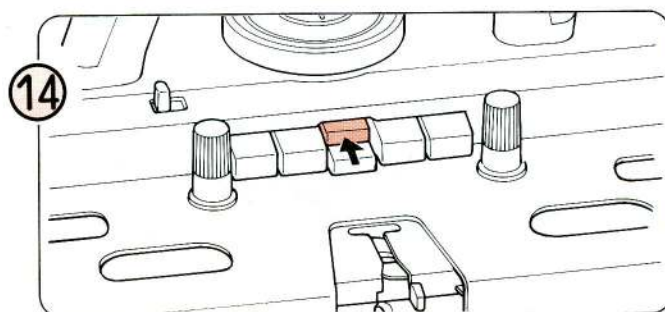
10

Unravel the row. (Refer to steps 10 — 13 on pages 88—89.)

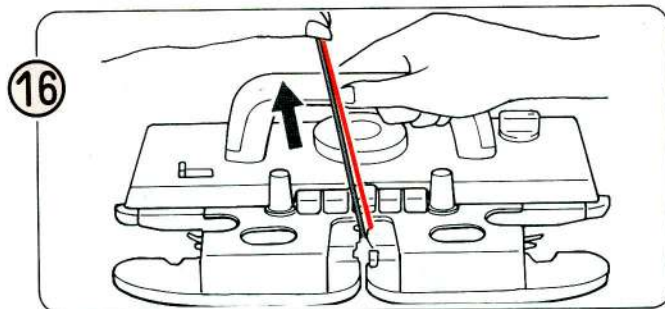
- ♣ If you have unravelled several rows of knitting, remember the number of rows you have unravelled. Even if you stopped the last row in the middle, you must still count this as one row.



Place the K carriage at the opposite end of the needle bed to the yarn. (If the yarn is on the same side as the K carriage, refer to page 89 for how to pass the carriage across the needles without knitting.) Push both part buttons and set the change knob to KC.



Push the cam buttons according to the pattern.



Continue knitting with the K carriage, pulling the yarn slightly on the first row to remove any slackness.

- ♣ If you are using the row counter or the knit leader, set their trippers to non-working position.

2. If you want to unravel some knitting (when the K carriage has gone past the end of the knitting)

- ① Begin by unravelling the rows. (Refer to steps ⑩ — ⑬ on pages 88—89.)
- ② Now follow steps ⑪ — ⑭ on page 91. (Before you enter the number of unravelled rows in step ⑪, you should clear the number in the display with the CE key.)

3. If the selected needles are pushed back by mistake

- ① Bring all the needles back to B position and take the yarn out of the yarn feeder.
- ② Push the CE key. Enter 0 and push the CR key.
- ③ Follow steps ⑫ — ⑮ on page 91.

● WHAT TO DO IF THE NEEDLES ARE SELECTED INCORRECTLY.

Check the following points:

- Make sure that you have programmed the pattern correctly.
- Make sure you have set the K carriage correctly and that you began with it outside a turn mark on the starting row of the pattern.
- Make sure the K carriage passed the center of the machine (needle green 1) on every row. If the carriage is returned without passing the center of the needle bed, the same needle selection will appear again. If this is what you have done wrong, correct the needle selection as follows:
 - (1) Place all selected needles in B position.
 - (2) Push both part buttons and take the K carriage across to the other side of the needle bed. (The K carriage must pass the center of the machine.)
 - (3) Place any selected needles in B position.
 - (4) Take the K carriage across the needle bed again, this time to get the correct needle selection.
 - (5) Push the cam buttons according to your pattern, check the yarn in the yarn feeder and continue knitting.

● WHAT TO DO IF THE NEEDLES ARE NOT SELECTED AND REMAIN AT B POSITION.

Check the following points:

- Make sure you have set the K carriage correctly and that you began with it outside a turn mark on the starting row of the pattern.
- Make sure that the ready lamp is lit. If it isn't, check whether the program is finished or not.
- Should the selector different? Check whether the pattern is made when selector II is on.
- When you began to pattern knit again after moving the K carriage outside the turn mark, did the K carriage pass the turn mark after setting the change knob to KC?

If the K carriage didn't pass the turn mark, correct this as follows:

- (1) Unravel the knitting down to a correct row.
- (2) Place the K carriage outside the turn mark on the opposite side of the needle bed to the yarn end.
- (3) Set the change knob to KC and push both part buttons.
- (4) Move the K carriage from outside the turn mark across the needle bed to select the needles.

● WHAT TO DO WHEN YOU HAVE ENTERED THE WRONG NUMBER FOR THE ROWS YOU HAVE UNRAVELLED.

Ⓐ The number you have entered is smaller than the correct figure. (e.g. You have unravelled 4 rows, but entered the number as 3 and then pushed the CR key.)

- ① Work out the number of rows you are short, and turn back the number indicated in the display by pushing the down key. In the example, you are one row short, so take the number back by one row using the down key.

If you are using the upside down key, use the up key to turn back the number.

- ② Now follow the instructions on page 91 steps ⑫ — ⑮.

Ⓑ The number you have entered is larger than the correct figure. (e.g. You have unravelled 2 rows, but entered the number as 4 and then pushed the CR key.)

- ① Work out the number of rows you have too many, and advance the number indicated in the display by pushing the up key. In the example, you have 2 rows extra, so advance the number forward by two rows using the up key.

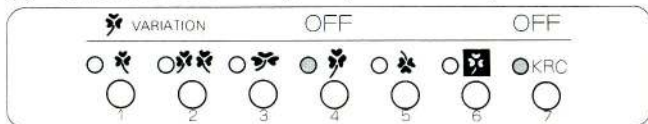
If you are using the upside down key, use the down key to advance the number.

- ② Now follow the instructions on page 91 steps ⑫ — ⑮.

● WHAT TO DO IF YOU CANNOT REMEMBER HOW MANY ROWS YOU HAVE UNRAVELLED.

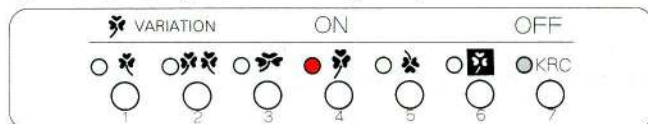
- ① When the ready lamp is flashing on and off, push the CE key. (The ready lamp is lit.)
- ② Set the change knob to N and push both part buttons.
- ③ Examine the swatch to find which row should be knitted next. (When using the KRC key, refer to ④.)
- ④ Now follow the instructions according to the setting of the variation keys.

Ⓐ When the double length key and KRC key are not in use



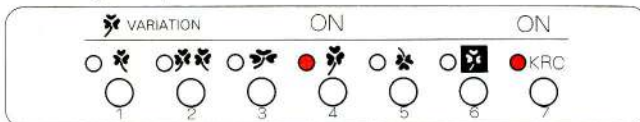
- ① Move the K carriage to the opposite side of the needle bed to the yarn end, and place it outside the turn mark.
- ③ Push the up or down key until the display shows the number you want for the next row to be knitted.
- ③ Set the change knob to KC.
- ④ Move the K carriage across the needle bed to select the needles.
- ⑤ Push the cam button(s) according to the pattern, check the yarn in the yarn feeder and continue to knit.

Ⓑ When using the double length key



- When you knit double length patterns each row is knitted twice. Check whether your next row is the first or the second row of the double length pattern.
- The steps are the same as for Ⓐ (when the double length and KRC keys are not in use). However, please bear the following points in mind when you reach step ②.
 - When you push the up or down key, the same number will appear in the display twice. If the row you want is the first row of the double length pattern use the number the first time it appears. If the row you want is the second row, then use the number the second time it appears.

Ⓒ When using the KRC key or KRC key and the double length key



- ① Unravel your knitting until the main yarn end is at the right of the swatch.
- ② Place the KR carriage at the right side of the ribber bed. (If the KR carriage is on the left side of the machine, remove it from the needle bed and place it at the right.) Place the K carriage outside the left turn mark.
- ③ Check the contrast colour stitches to find out which row number should be knitted next.
- ④ Push the up or down key until the display shows the number you want for the next row to be knitted.

NOTE: When you are using the double length key, the same number will appear in the display four times. Use the number the first time it appears, regardless of whether the double length key is on or off.

- ⑤ Set the change knob to KC and move the K carriage across the needle bed to select the needles.
- ⑥ Connect the K and KR carriages check the yarn in the yarn feeder and continue to knit.

● WHAT TO DO IF THE ELECTRIC POWER IS CUT OFF WHILE YOU ARE KNITTING.

Ⓐ If the power is cut off while stitches are actually being knitted with the K carriage.

- ① Move the K carriage to outside the turn mark on the side towards which it has moved. Set the change knob to N.
- ② Turn on the power.
- ③ Push the CR key. (The ready lamp flashes on and off.)
- ④ Unravel the knitting down to a row of correct pattern knitting.
- ⑤ Place the K carriage at the opposite side of the needle bed to the yarn end. Push both part buttons and move the K carriage across the needle bed from outside the turn mark, to select the needles.

Ⓑ Push the CE key. (The ready lamp is lit.)

⑦ Push the cam buttons according to your pattern. Check the yarn in the yarn feeder and continue knitting.

Ⓑ If the power is cut off when the K carriage is clear of the knitting.

① Turn on the power.

② Move the K carriage across the turn mark and continue knitting.

● SHOULD YOU PUSH THE CR KEY BY MISTAKE ...

Push the CE key. (The ready lamp stops flashing.)

● SHOULD YOU TURN ON THE M LAMP BY MISTAKE ...

Push the C key. (The M lamp goes off).

● WHAT TO DO WHEN THE LETTER E IS FLASHING ON AND OFF IN THE MEMO DISPLAY.

① Push the CE key to clear the display.

② Enter the correct figure.

In the following cases, the E will flash on and off in the memo display.

- When you enter an unmemorized pattern number.
- When you enter a pattern position higher than yellow 799 or green 100.
- When you are programming your own pattern and enter a stitch number above 200 or a row number higher than can be knitted.
- When you push the CR key without moving the K carriage after a correction.

HOW TO CORRECT MISTAKES IN THE INPUT PROGRAM

● WHAT TO DO WHEN YOU USE THE AND KEYS INCORRECTLY

① Using the left key and the down key, proceed to the position where you want to make the correction.
♣ The pattern data from the stitch indicated in the display is deleted.

② Enter the correct pattern data from the stitch indicated in the display.

● WHAT TO DO IF THERE IS AN INSUFFICIENT NUMBER OR THERE ARE NO ROWS LEFT FOR YOUR OWN PATTERN PROGRAM.

- You can enter your own pattern after you have deleted one or more patterns memorized in the computer.

① Push the input key to stop the pattern input program (the input lamp goes out).

② Check back and find a pattern which has more than the number of stitches you require to make up the shortfall for the new pattern.

- ♣ If you cannot find a pattern with sufficient stitches for your requirements, then you will have to delete more than one pattern.

- ♣ To find out how to check the memorized pattern, see "CHECK THE PATTERN DATA YOU HAVE STORED YOURSELF" on page 56.

③ Push the input key. (The ready lamp goes off.)

- ♣ The display shows the number which is used for the new pattern.

④ Push the CE key to clear the display and enter the number of the pattern you want to delete, then push the C key.

- ♣ The number in the display together with all the pattern data for that number has been deleted from the computer.

- ♣ When you want to delete more than one pattern, enter the pattern number you want to delete, then push the C key.

⑤ Push the input key after you have deleted the pattern. (The input lamp is off).

⑥ Enter your own pattern program by referring to page 51.

● WHAT TO DO WHEN THE DISPLAY DOESN'T INDICATE THE PATTERN NUMBER, EVEN IF THE INPUT KEY IS TURNED ON.

- It means that the memory capacity is completely full. You will have to delete some of the memorized patterns before you can program fresh patterns.

① Check back and find a pattern which has more than the number of stitches you require to make up the shortfall for the new pattern.

- ♣ If you can't find the pattern you want to delete from the computer, look for it with the CHECK routine for your own patterns on page 56.

② Enter the pattern number that you want to delete, and push the C key.

- ♣ When you want to delete more than one pattern, repeat this step.



③ Push the input key after you have deleted the pattern. (The input lamp is off).



Enter your own pattern program by referring to page 51.

● WHAT TO DO IF THE ELECTRIC POWER IS CUT OFF WHILE YOU ARE ENTERING PATTERN DATA.

- When the electric power is cut off while you are using the input program, follow the instructions according to the step you have reached.

INPUT PROGRAM STEPS

1. Turn on the input key.
2. Push the step key.
3. Enter the number of stitches for the pattern.
4. Push the step key.
5. Enter the number of rows for the pattern.
6. Push the step key.
7. Enter the pattern data using the  and  keys.

- ① What to do if the electric power is cut off while entering the input program during steps 1 to 5.
 - The pattern data will revert back to the way it was just before you turned on the input key. Turn on the electric power and push the input key to activate it again. Enter the input program from the beginning.
- ② What to do if the electric power is cut off when pushing the step key at step 6, after you have entered the number of rows for the pattern, or while entering pattern data with the data key at step 7.
 - All the pattern data entered before the power was cut off is memorized in the computer correctly. But the data for the rest of your pattern stitches will have been automatically entered as  key stitches by the computer.
 - (1) If the pattern data programming is nearly finished, use the check program to correct the  key entries for the remainder of the stitches.
Please refer to page 56.
 - (2) If you had only just started pattern data programming, delete the pattern data and begin the input program again.
 1. Turn on the electric power.
 2. Push the input key (on) and push the CE key to clear the indication in the display. Enter the pattern number you want to delete and push the C key. Turn off the input key.
 3. Push the input key (on) and enter the pattern data from the beginning again.

WHEN USING THE CARTRIDGE

● WHAT TO DO WHEN THE SAVE LAMP IS NOT LIT EVEN IF THE SAVE KEY IS PUSHED

CAUSE 1

The cartridge which was used for another model is inserted.

- A If you insert the cartridge by mistake....
Turn off the power switch and change the cartridge to the correct one. Turn on the power switch and start programming again.
- B If you want to use the cartridge for this machine....
When you are using the stitch pattern cartridge II or III, delete all the data stored in the cartridge to use it with this machine.
 - ① Enter 888.
 - ② Push the step key.
All the data stored in the cartridge is deleted and you can use the cartridge with this machine.

CAUSE 2

Data of your original pattern saved in the cartridge is damaged for some reason.
Delete the damaged data using the above step B. You can use the cartridge again.

● WHAT TO DO WHEN AN ERROR MESSAGE APPEARS IN THE MEMO DISPLAY

CAUSE 1

The cartridge is not inserted into the slot securely.

Turn off the power switch of the knitting machine and insert the cartridge into the slot securely. Then, start the program again.

CAUSE 2

You have entered the page no. which is not stored in the cartridge.

Push the CE key to clear "E" and enter the correct no.

CAUSE 3

Data of your original pattern saved in the cartridge is damaged for some reason.

You can use this cartridge after deleting the damaged data.

Push the CE key.

Enter 888 and push the step key.

All the data stored in the cartridge is deleted and you can use the cartridge again.

CAUSE 4

Design system cartridge is inserted.

Turn off the power switch and change the cartridge to the correct one.

Turn on the power switch and start programming again.

USING THE KNIT LEADER (option)

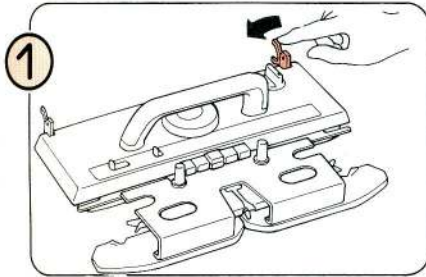
Set up the knit leader to the knitting machine referring to the knit leader instruction manual.

♣ When using the knit leader, set the knit leader trippers (both right and left) to the working position.

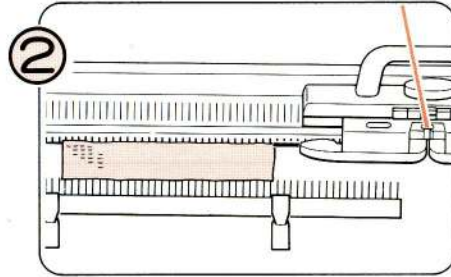
● KNITTING A TENSION SWATCH

• To knit a garment to the correct size of your pattern you need to know the size of the stitch.

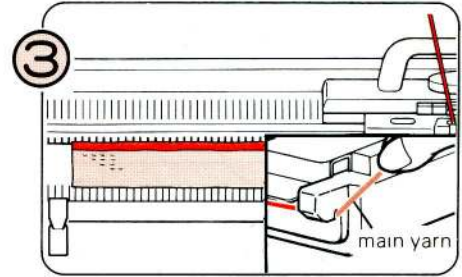
• Before you start knitting, you should make a sample tension swatch and from it measure the length of 30 rows and 20 stitches.



1 Set the row counter number 000. Set the trippers (right) to working position.

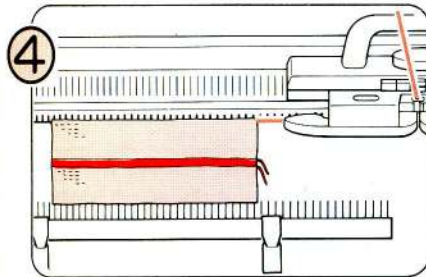


2 Bring forward 40 needles (20 needles on either side of center mark) to B position, and knit ten rows in main yarn.

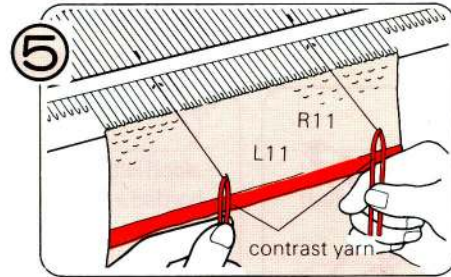


3 Remove the main yarn and knit 2 rows with contrast colour yarn. The row counter is 012.

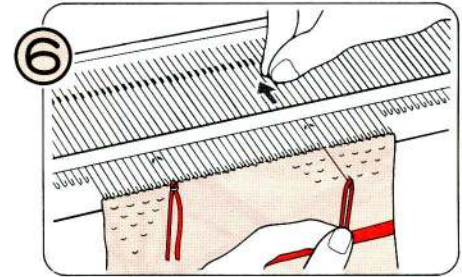
♣ Cut the contrast yarn and hook it to the yarn clip of the yarn tension unit.



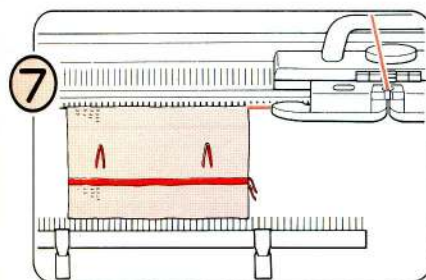
4 Re-thread the main yarn and knit 15 rows. The row counter is 027.



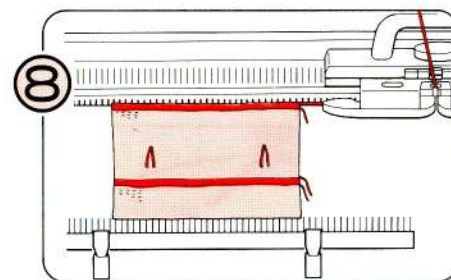
5 Bring forward both 11th needle on either side of center 0 to E position. Hook a short piece of contrast yarn onto the 2 needles.



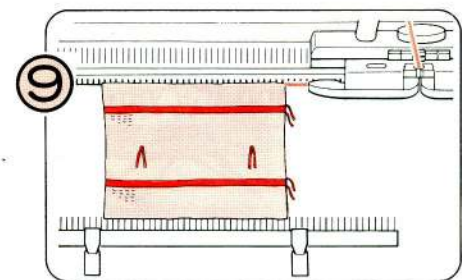
6 Bring back the two needles to make stitches.



7 Knit 15 rows again in main yarn. The row counter is 042.

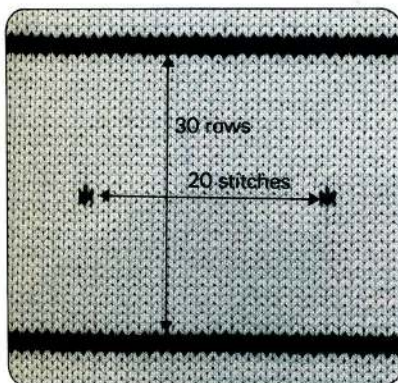


8 Remove the main yarn and knit 2 rows with contrast colour yarn. The row counter is 044.



9 Re-thread the main yarn and knit 10 rows. The row counter is 054. Remove the swatch from the knitting machine.

● HOW TO MEASURE THE SWATCH



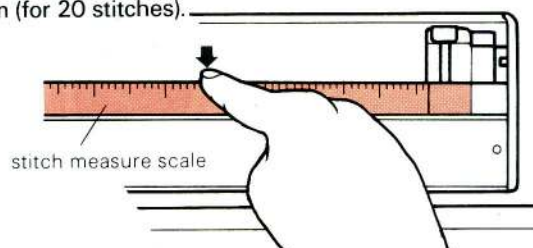
After pressing the swatch according to yarn label, set the regulators.

① Measure the height of 30 rows (between rows knitted in contrast colour).

② Measure the width of 20 stitches (between the 2 contrast colour stitches).

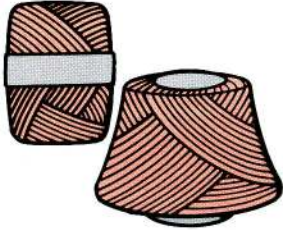
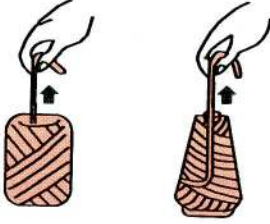

③ Select the correct stitch scale. (See KL instruction book.)

♣ Stitch measure scales attached with the knitting machine are for 80mm — 211 mm (for 20 stitches).

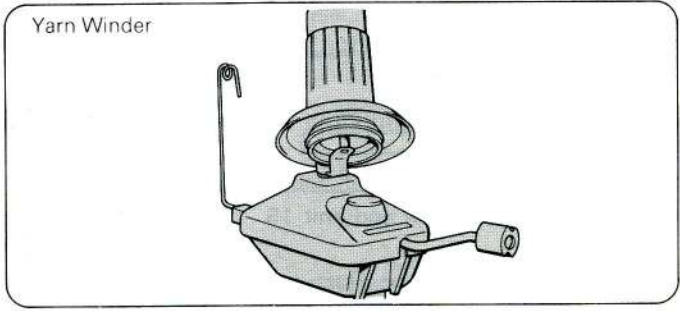
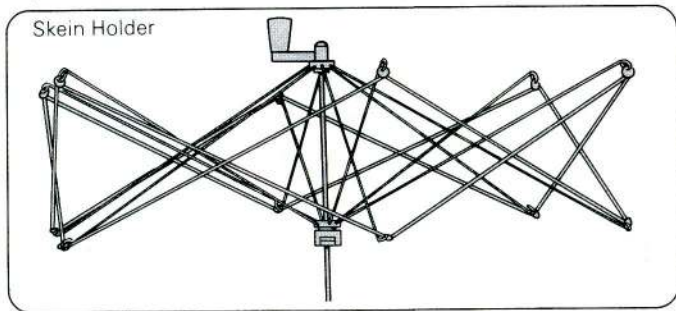


PREPARING YOUR YARN

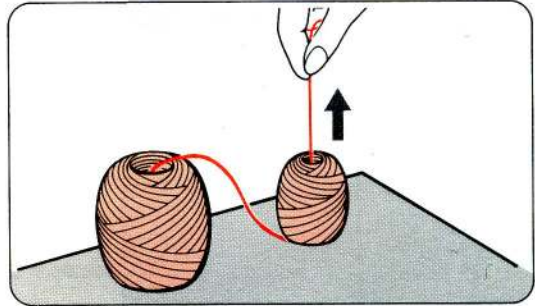
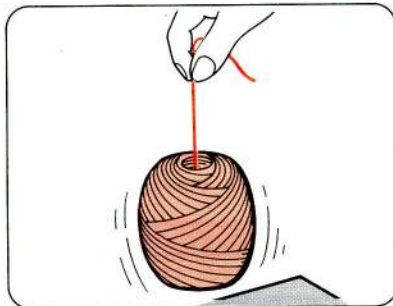
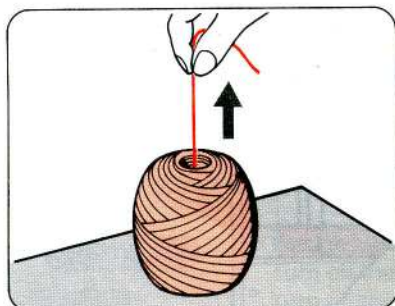
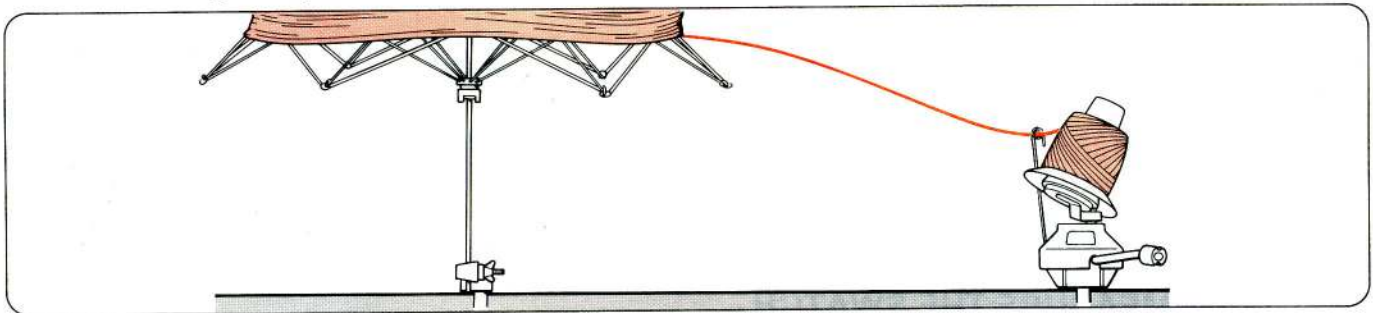
- When you are new to machine knitting, you are advised to start with new yarn. Choose one that is smooth and of reasonably good quality. Avoid hairy and harsh, poor quality yarns as they are difficult to knit.

	<p>These yarns are suitable for use without rewinding.</p> <ul style="list-style-type: none"> ♣ Pull the yarn from the center of a ball yarn. Use the yarn from the outside of a coned yarn. 	
	<p>These yarns should be rewound using a Skein Holder and a Yarn Winder.</p>	

Both the Skein Holder and Yarn Winder can be purchased separately.



● Rewinding the yarn



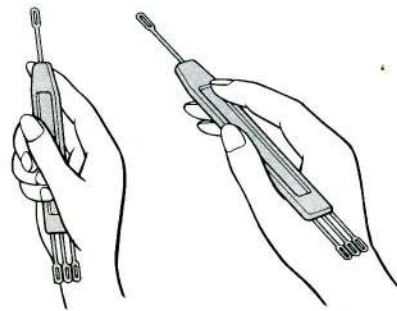
Yarn pulled from the center of a rewound ball should come out freely without lifting the ball from the table.

If the yarn does not flow freely, pull some yarn out of the center of the ball.

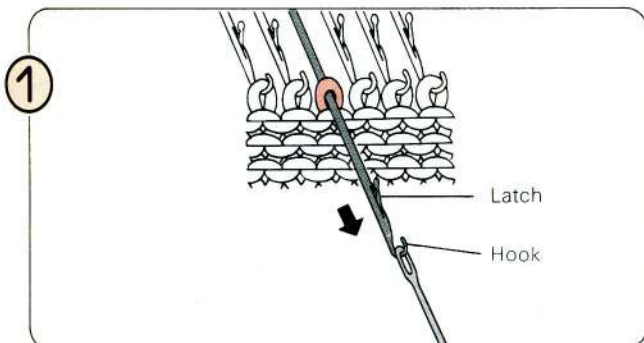
HOW TO USE THE TRANSFER TOOL

• Use when you decrease, increase, transfer stitches, etc.

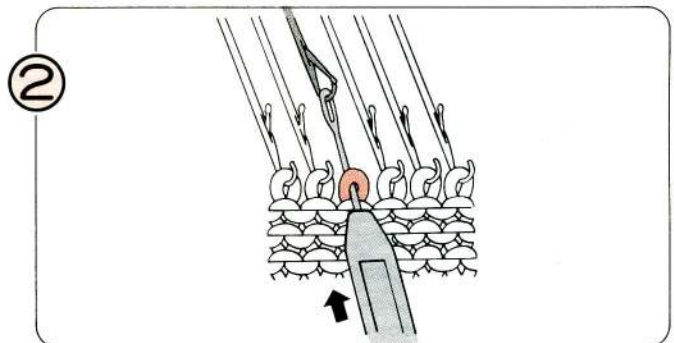
■ How to hold the transfer tool.



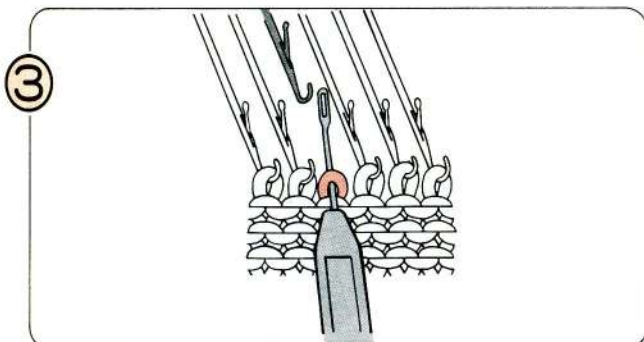
Transferring Stitch



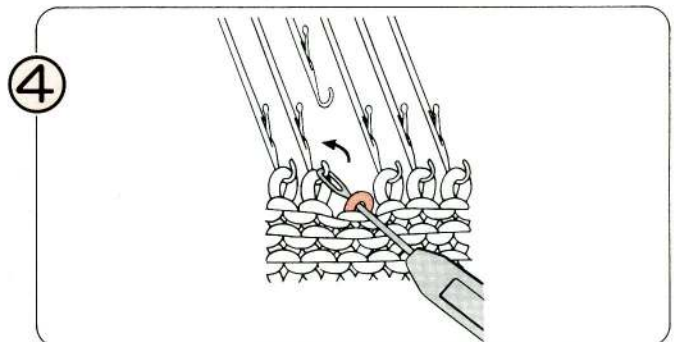
Place the eye of a single transfer tool over the needle hook, and pull the needle towards you until the stitch passes behind the latch.



Holding the transfer tool in line with the needle, use it to push the needle back so that the stitch slips onto the transfer tool.



Lift the transfer tool together with the stitch, and place it onto the adjacent needle.

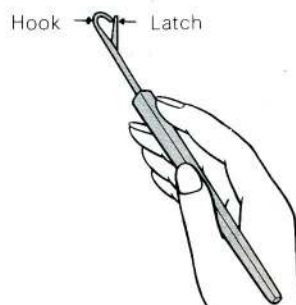


Lift the transfer tool slightly so that the stitch slides off into the hook of the needle. Then remove the transfer tool. One stitch has been transferred.

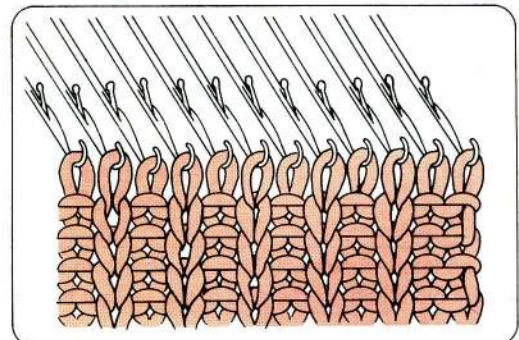
HOW TO USE THE LATCHET TOOL

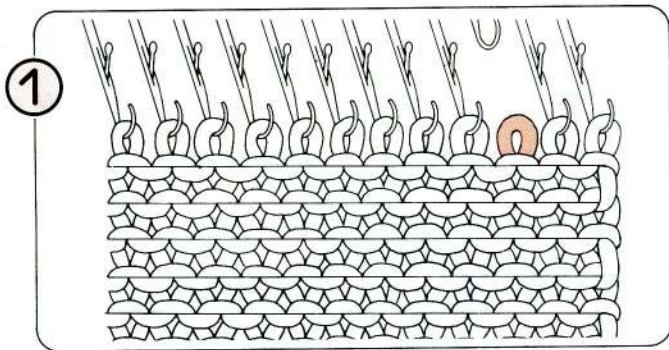
• Use when you make ribbing, pick up dropped stitches, etc.

■ How to hold the latchet tool

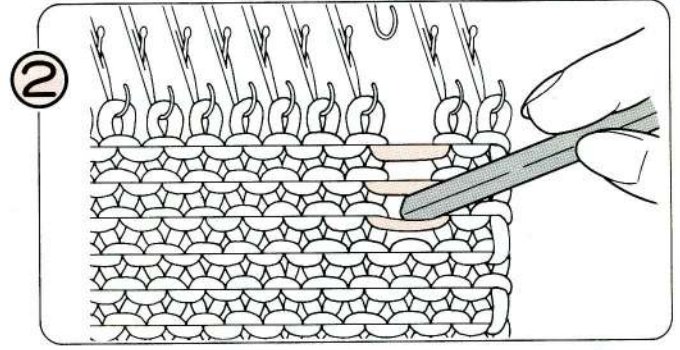


• Making Rib by hand

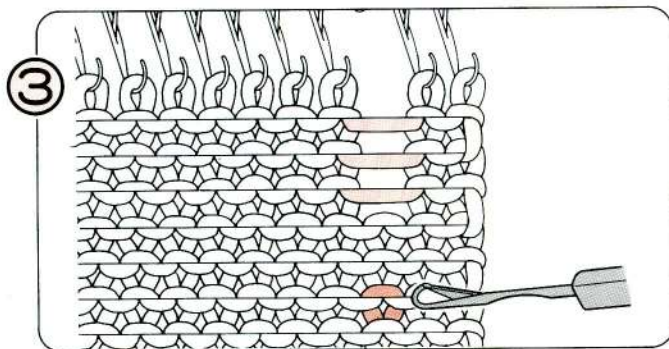




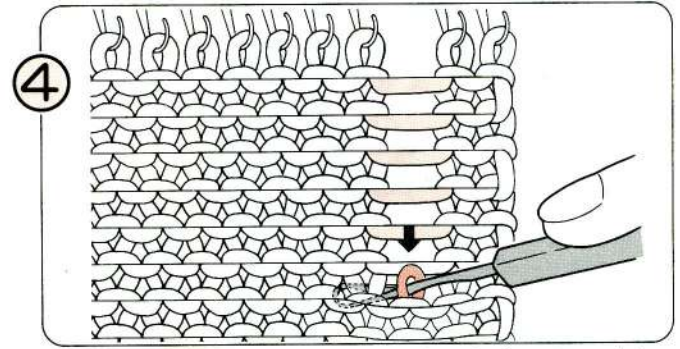
1 Bring the needle for your first "purl" stitch forward to E position by hand. Take the needle back to A position so that the stitch drops off the needle.



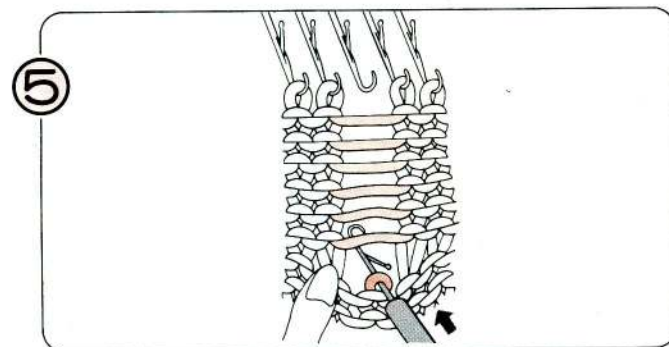
2 Using the tip of your latchet tool, ladder the stitch down to within a few rows of the point where you want to start the ribbing.



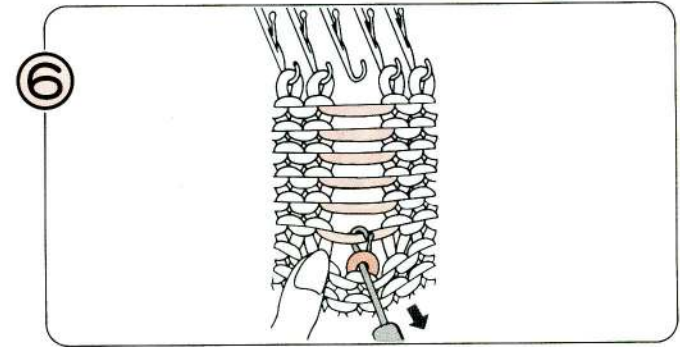
3 With the latchet tool hook the bottom stitch where the ribbing will begin.



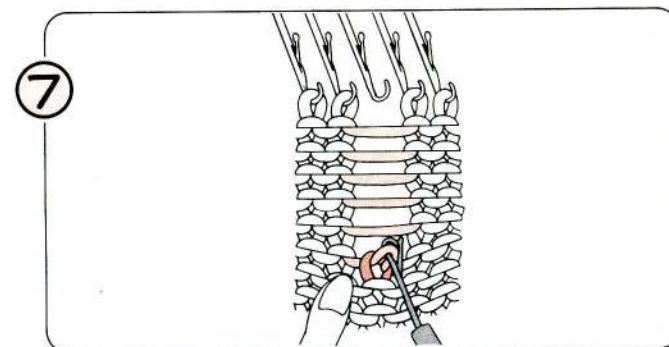
4 Push down with the latchet tool so that the last few stitches drop.



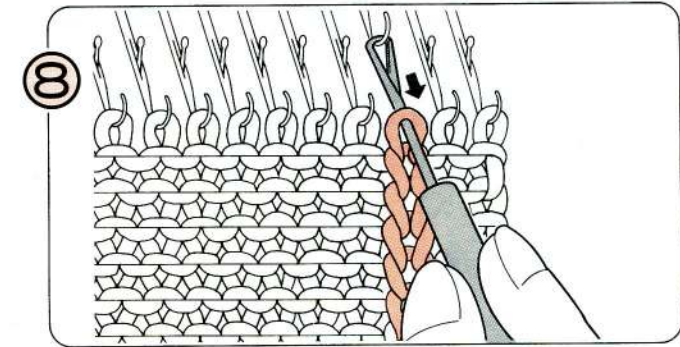
5 Hold the knitting firmly with your other hand. Push the latchet tool forward to put the bottom stitch behind the latch.



6 Catch the next horizontal bar above with the hook of the latchet tool. Pull the latchet tool towards you.



7 The latch closes with this new stitch in the hook. Gently slip the old stitch off the end of the latchet tool. A purl stitch has been formed.



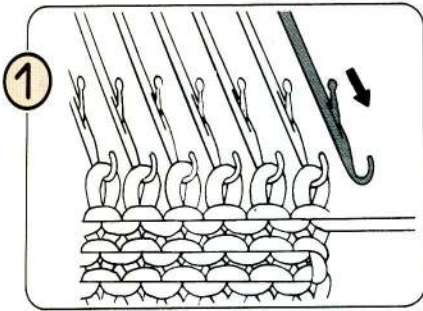
8 Continue in this way until you reach the top, then hook the last stitch onto the needle as shown.

HOW TO INCREASE STITCHES

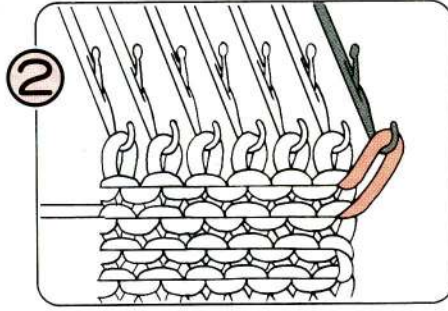
• Increasing one stitch

Simple method

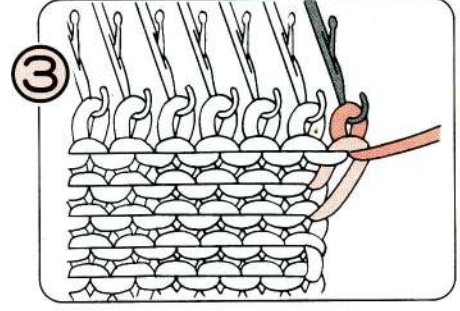
The K carriage and yarn are at the side where you wish to increase the stitch.



On the K carriage side, bring one edge needle forward from A to B position.



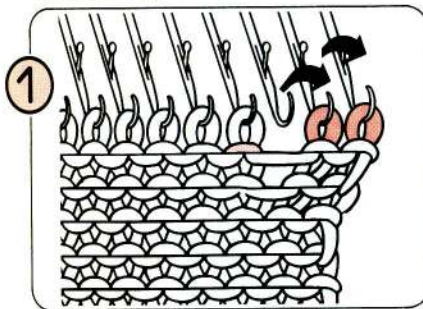
Knit one row to the left. The empty needle picks up the yarn.



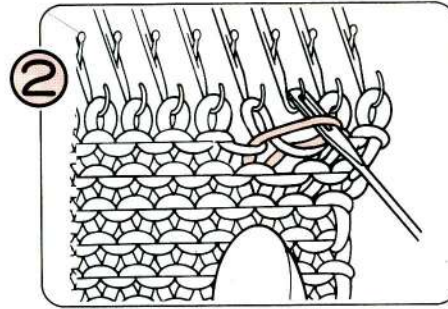
Knit one row to the right. The new stitch knits.

Fully fashioned method

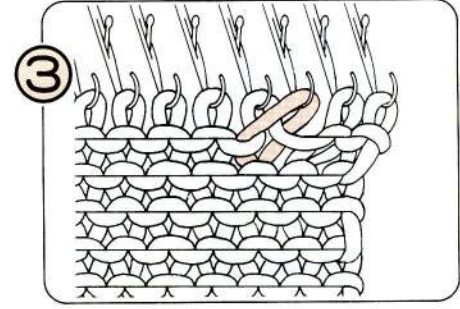
The K carriage can be at either end of the needlebed.



Using the 1 x 2 transfer tool, move two stitches out by one needle, so that the third needle from the edge becomes empty.



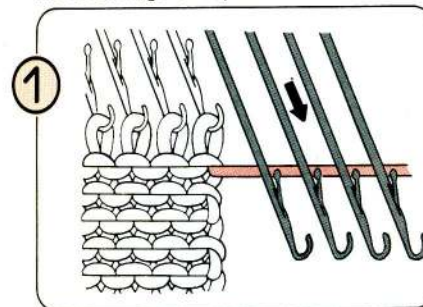
Pick up the loop as shown using the transfer tool.



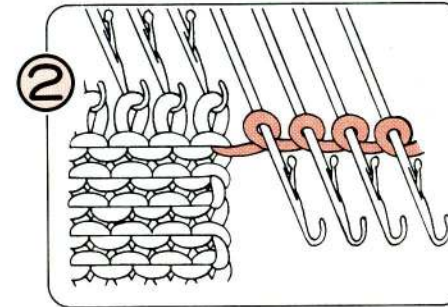
Place this loop onto the empty needle and continue to knit.

• Increasing several stitches

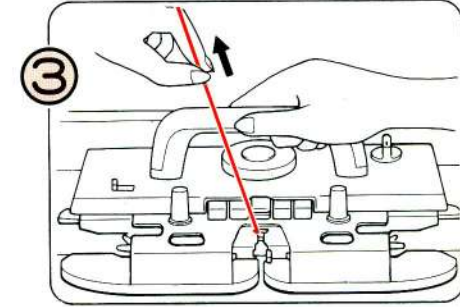
The K carriage and yarn are at the side where you wish to increase the stitches.



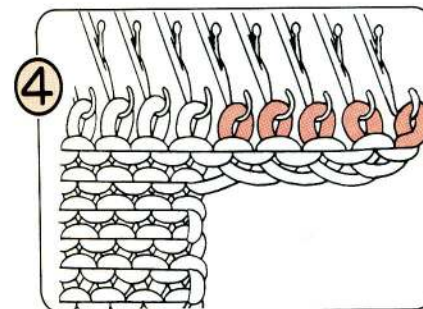
On the K carriage side, bring the needles to be increased forward from A position to E position.



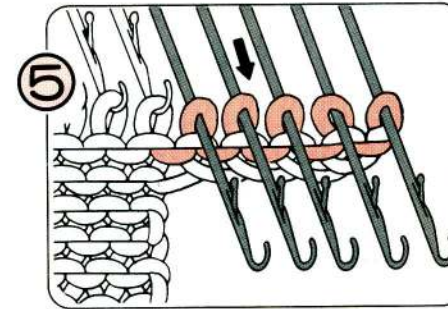
Wind the yarn loosely around the stem of each needle as shown.



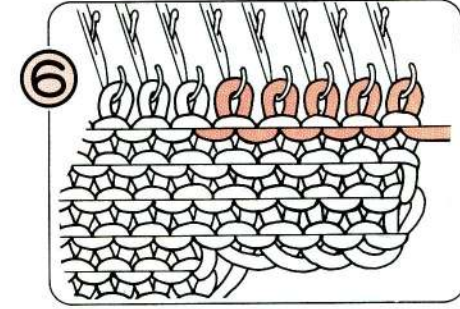
Pull up any loose yarn with your hand, and knit one row.



The needles in E position have knitted.



Pull the needles containing the new stitches to E position again, and knit one row. (This helps them to knit properly).



Knit two or three more rows in the same manner as step 5, then continue knitting normally.

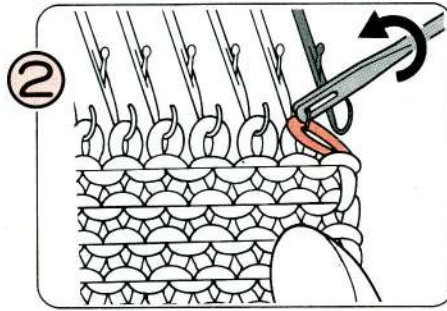
HOW TO DECREASE STITCHES

• Decreasing one stitch.

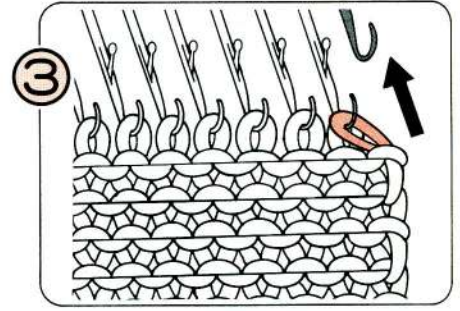
Simple method



① Remove one stitch at the edge onto your transfer tool.

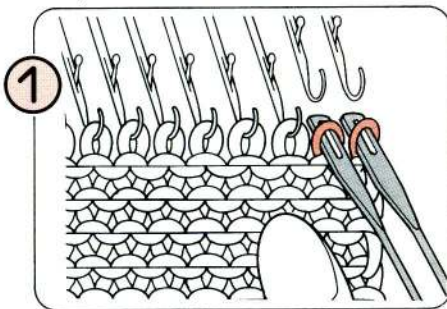


② Place the transfer tool onto the hook of the adjacent inside needle, and transfer the stitch.

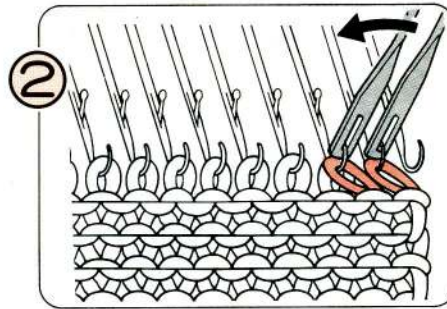


③ Return the empty needle to A position.

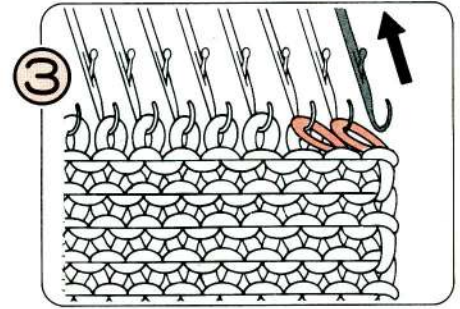
Fully fashioned method



① Remove two stitches at the edge using a 2 eyed transfer tool.



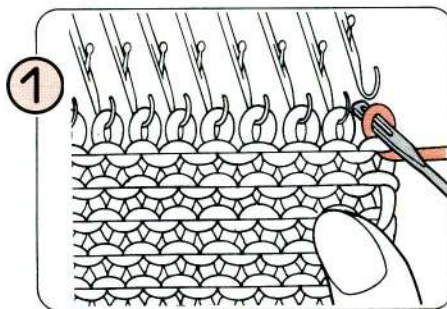
② Place the transfer tool onto the hooks of the adjacent inside needles, and transfer the stitches.



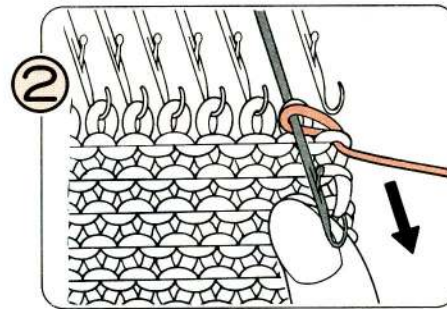
③ Return the empty needle to A position.

• Decreasing several stitches

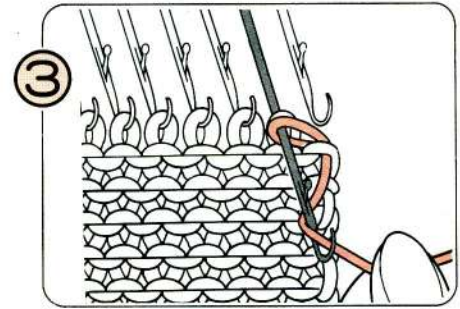
The K carriage and yarn are at the side where you wish to decrease the stitches.



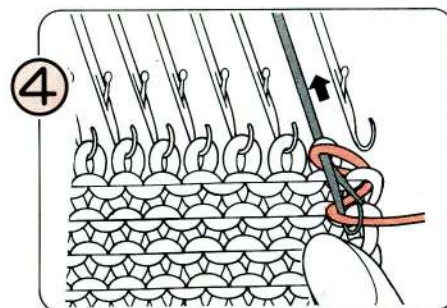
① On the K carriage side transfer the end stitch onto the adjacent inside needle.



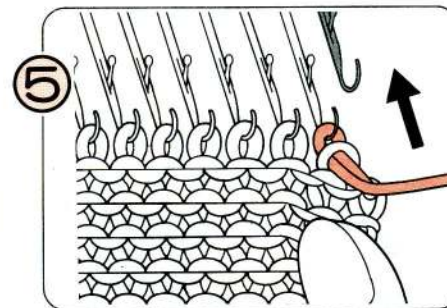
② Bring this needle forward so that the two stitches are behind the latch.



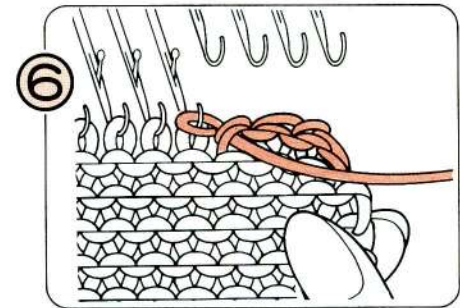
③ Loop the yarn around the needle hook in front of the latch as illustrated.



④ Manually push the needle back so that a single stitch is formed.



⑤ Return the empty needle to A position.



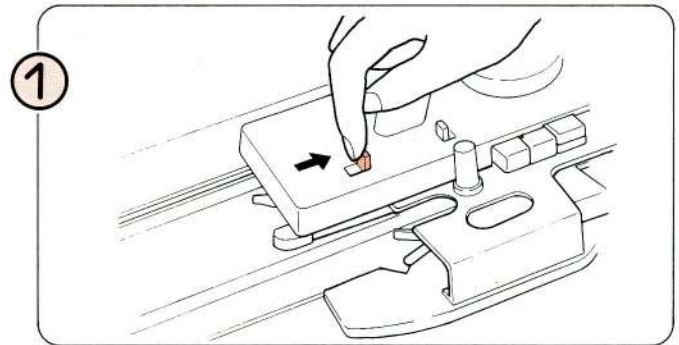
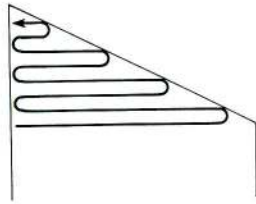
⑥ Repeat steps ① — ⑤, but on the last stitch work step ① only.

NOTE: Take care not to make the stitches too tight.

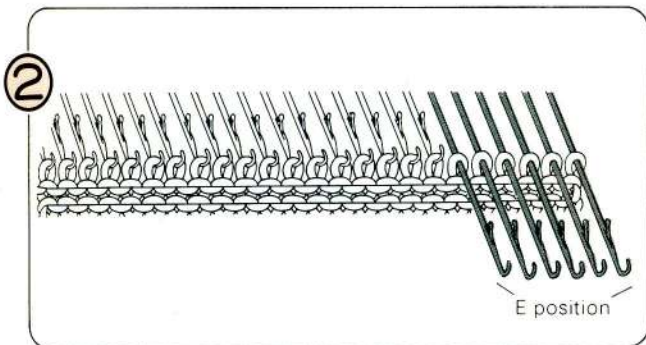
PARTIAL KNITTING

Decreasing stitches using the Holding Position (H.P)

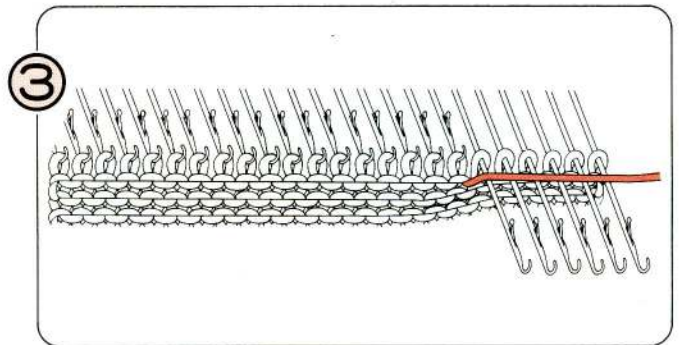
- When working decreases for shoulders, neck opening etc., set the holding cam lever on the K carriage to H.



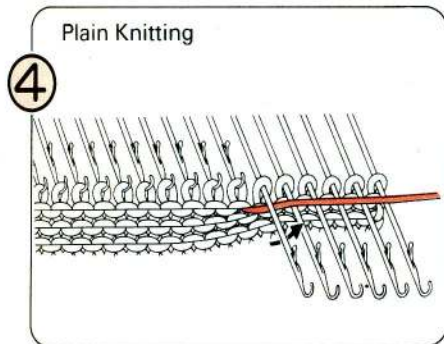
Set the holding cam lever to H and the cam buttons and change knob according to the pattern.



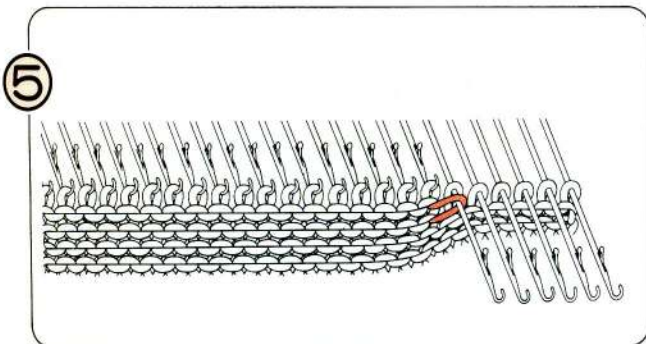
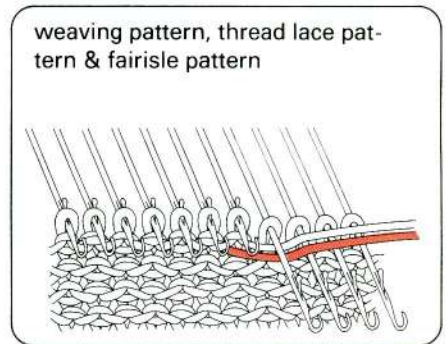
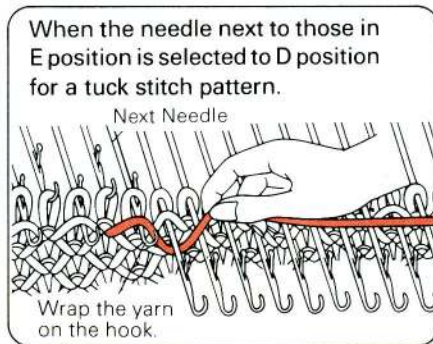
On the opposite side to the K carriage, bring the needles you want to decrease forward to E position.



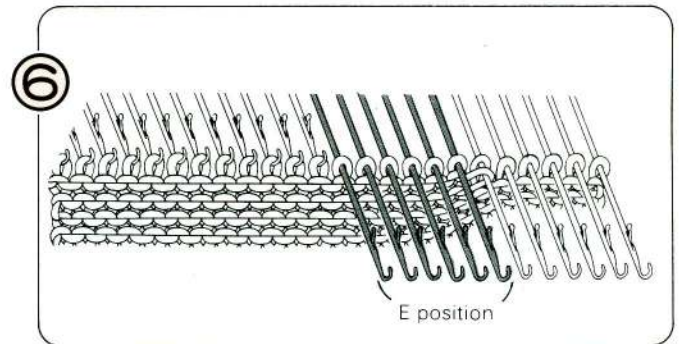
Knit one row. The needles in B position (B and D position in the case of pattern knitting) have been knitted and those in E position have not been knitted.



Wrap the yarn by passing it under the stem of the first needle in E position as shown.



Pull up any loose yarn with your hand and knit one row. The yarn is wrapped around the end needle in holding position as shown above.

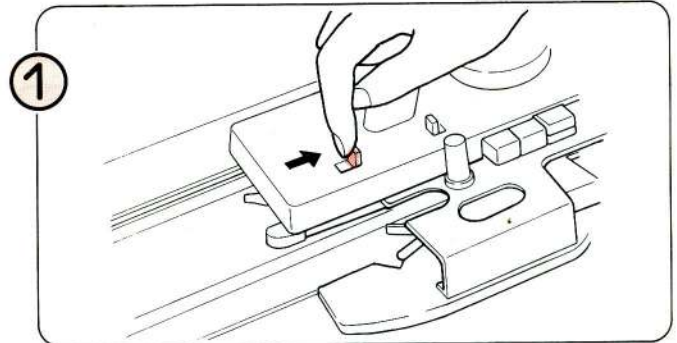
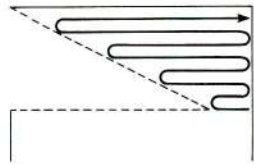


Continue moving needles to be decreased into E position, repeating step 3 - 5.

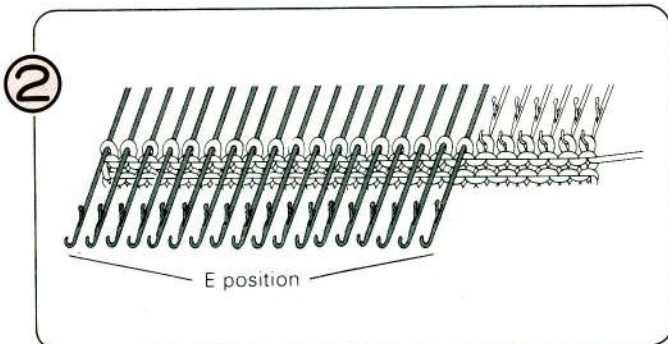
♣ After partial knitting is complete, return the holding cam lever to N.

Increasing stitches from the Holding Position (H.P)

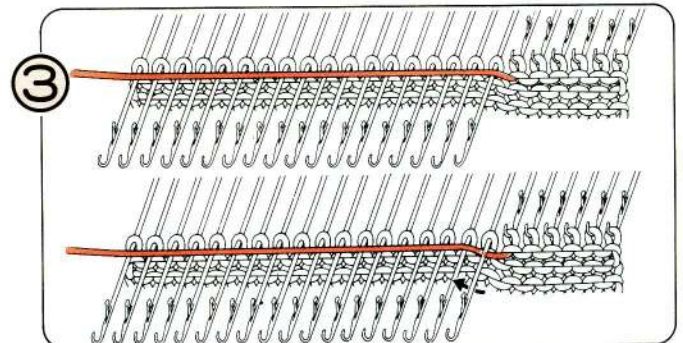
- When working increases (for example the hemline of a skirt), set the holding cam lever to H.



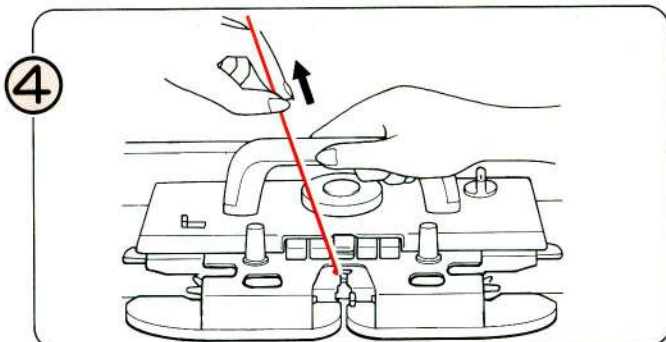
Set the holding cam lever to H and the cam buttons and change knob according to the pattern.



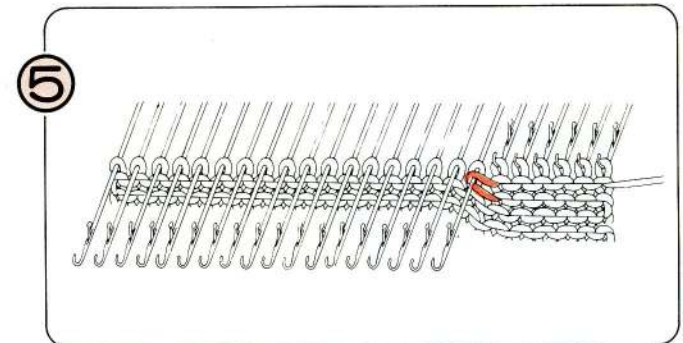
On the opposite side to the K carriage, bring forward to E position those needles that you do not want to knit.



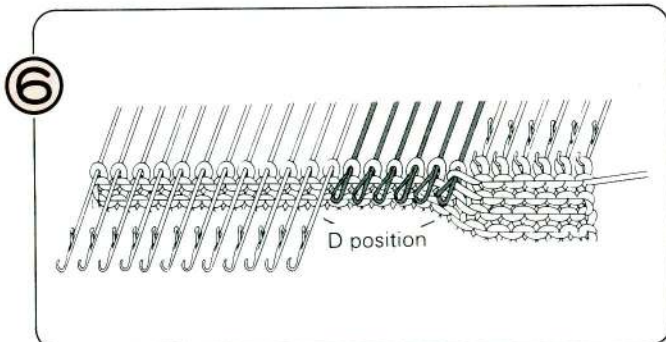
Knit one row. The needles in B position (B and D position in the case of pattern knitting) have been knitted, and the yarn has passed over those in E position. Wrap the yarn under the stem of the first needle in E position. (In the case of pattern knitting, refer to step ④ on page 104.)



Pull up any loose yarn with your hand and knit one row.

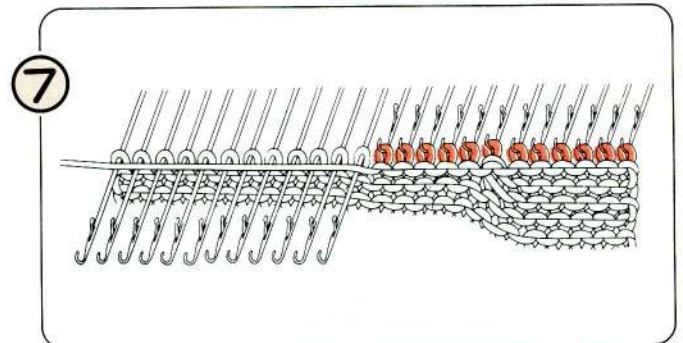


The yarn is wrapped around the end needle in holding position as shown above.



Manually push the needles to be increased from E to D position.

- ♣ For pattern knitting, put the appropriate needles to B position according to the pattern. When you return these needles from D to B position, place the stitches into the needle hooks using the transfer tool.

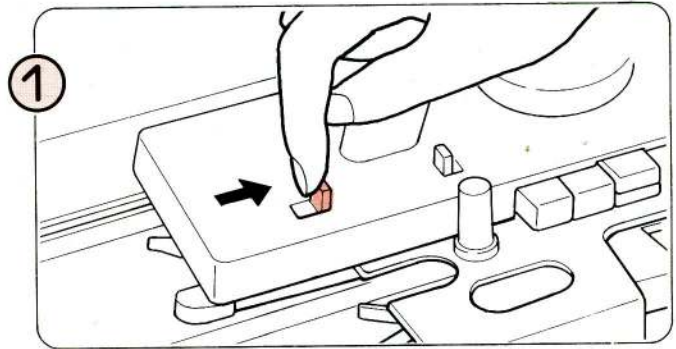
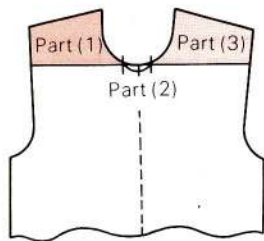


- 1) Knit one row and the needles you brought to D position will have been knitted.
 - 2) Repeat steps ③ — ⑥ .
- ♣ After partial knitting is complete, return the holding cam lever to N.

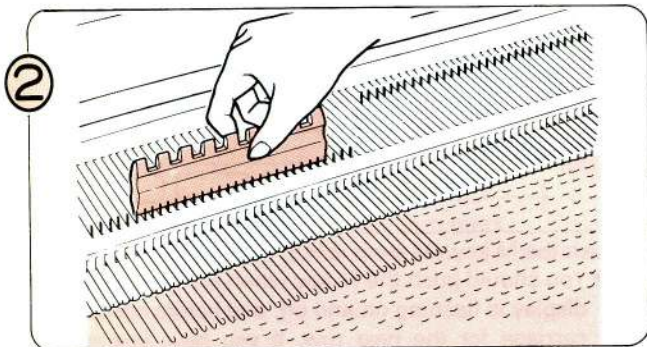
HOW TO SHAPE A ROUND NECKLINE

• STOCKING STITCH AND PLATING

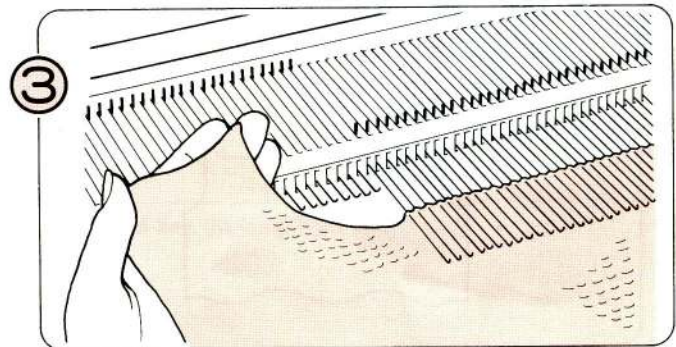
- The following example begins with the yarn and K carriage at the left.
Reverse the instructions (e.g. read left for right) if beginning with yarn and K carriage at the right.



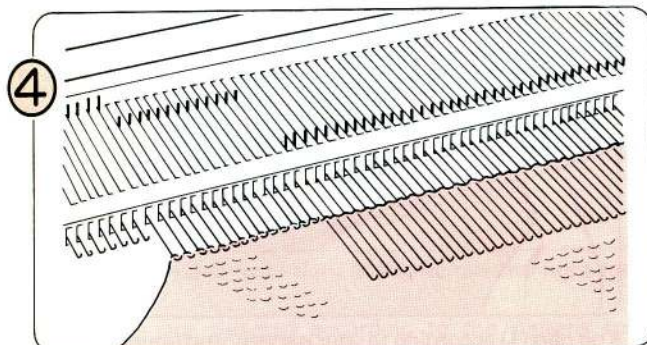
On the K carriage, set the holding cam lever to H.



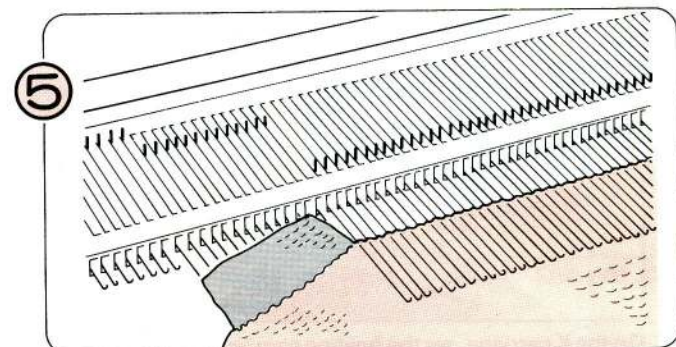
Using the flat side of the 1 x 1 needle pusher, bring the needles for parts (2) and (3) forward to E position. These needles will not knit.



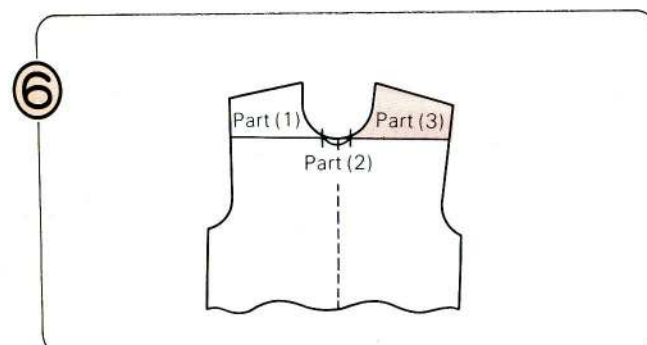
Knit part (1) according to your pattern, and return needles to A position.



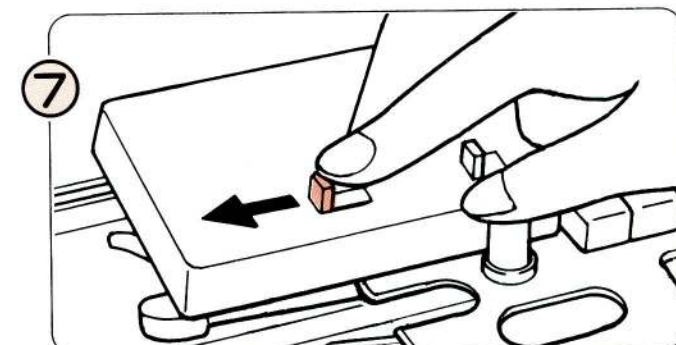
Bring needles from part (2) to B position at the same time replacing the stitches into the needle hooks.



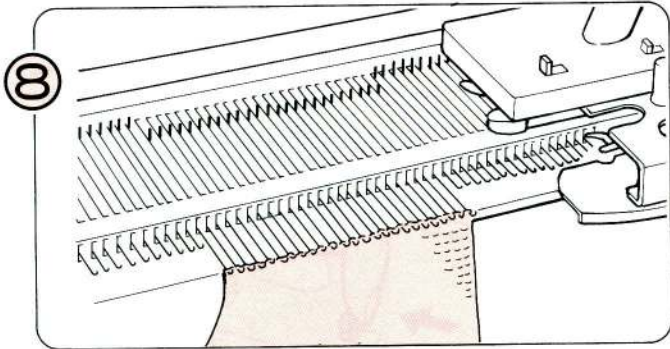
Waste knit part (2) and remove this from machine. Return needles to A position.



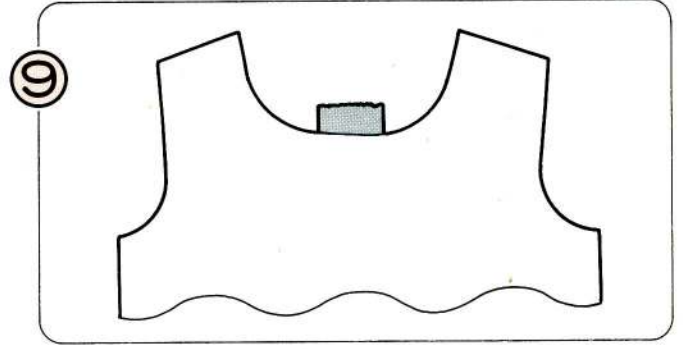
Now only the needles for part (3) are left in E position.



Set the holding cam lever on the K carriage to N.



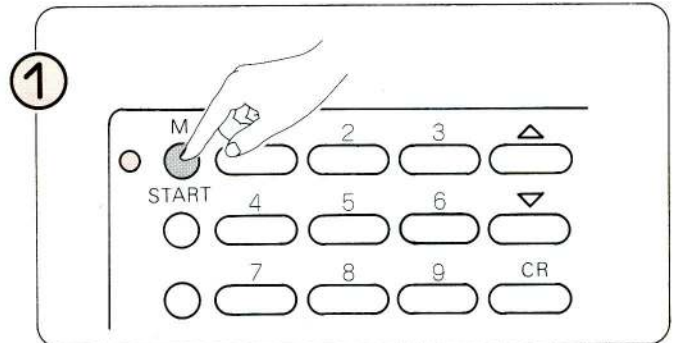
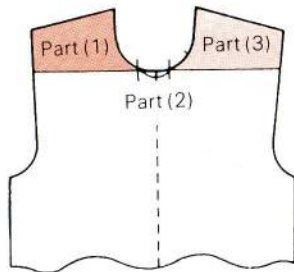
Knit part (3) according to your pattern.



The neckline shaping has now been completed.

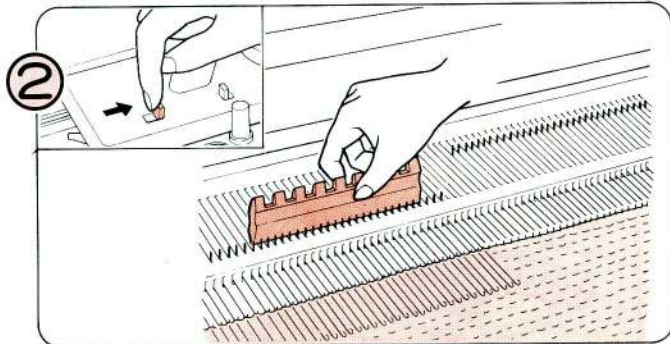
• **PATTERN KNITTING**

- The following example begins with the yarn and K carriage at the left. Reverse the instructions (e.g. read left for right) if beginning with yarn and K carriage at the right.

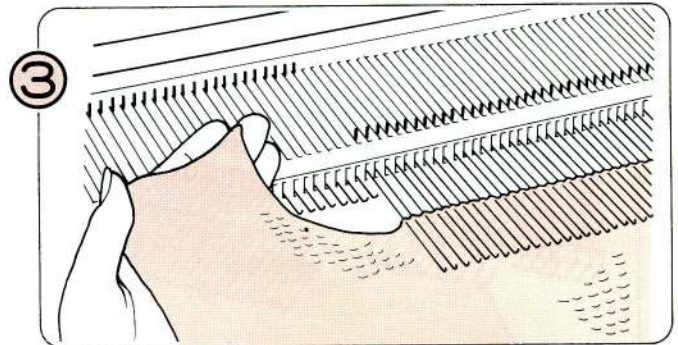


Push the M key. (M lamp is lit.)

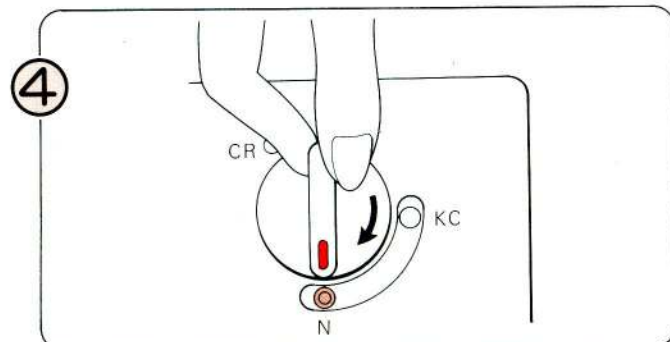
- ♣ You should push the M key when the row number in the display is flashing on and off, and before operating the K carriage for the next row. If you have operated the K carriage, use the down key to put the row number back by one row, and then push the M key.



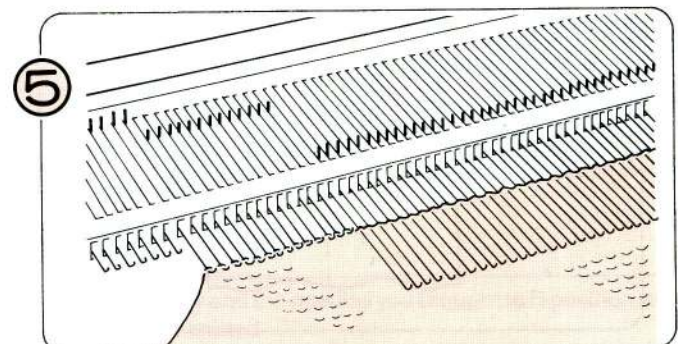
On the K carriage, set the holding cam lever to H. Using the flat side of the 1 x 1 needle pusher, bring the needles for parts (2) and (3) forward to E position. These needles will not knit.



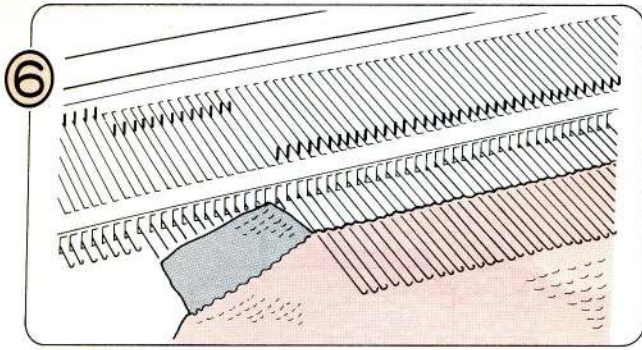
Knit part (1) according to your pattern, and return needles to A position



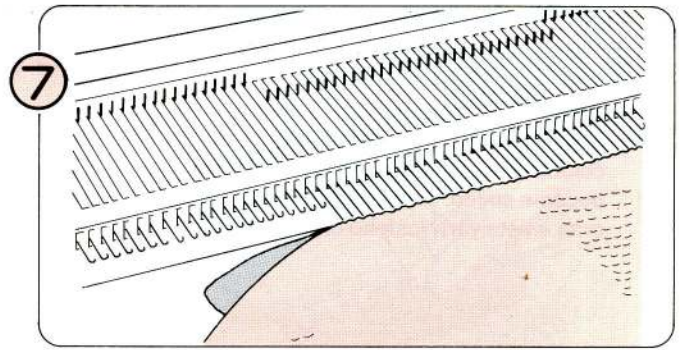
Set the change knob to N.



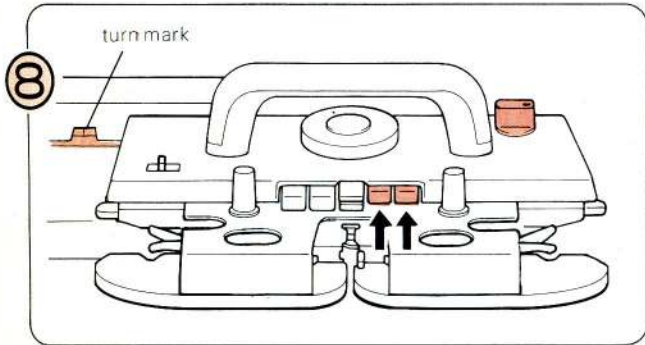
Bring needles from part (2) to B position at the same time replacing the stitches into the needle hooks.



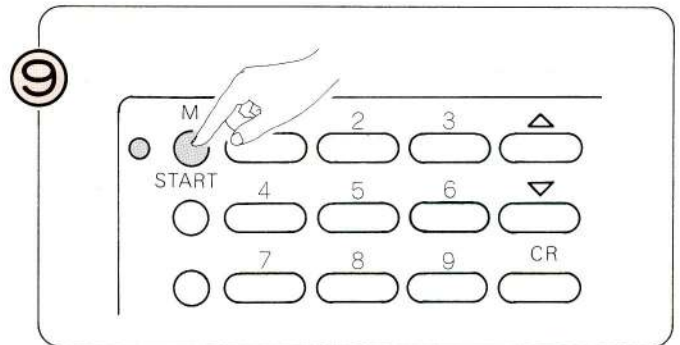
Waste knit part (2) and remove this from machine. Return needles to A position.



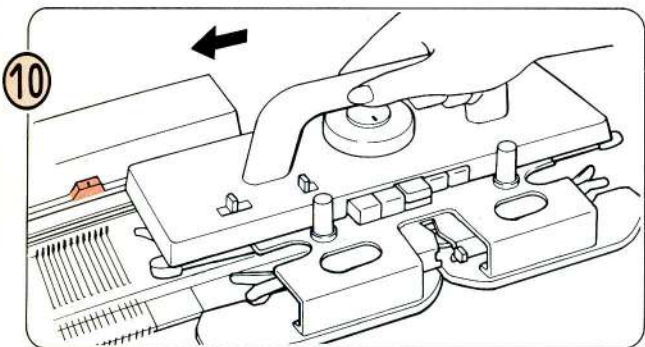
Now only the needles for part (3) are left in E position. Bring these to B position the same as you did for part (2).



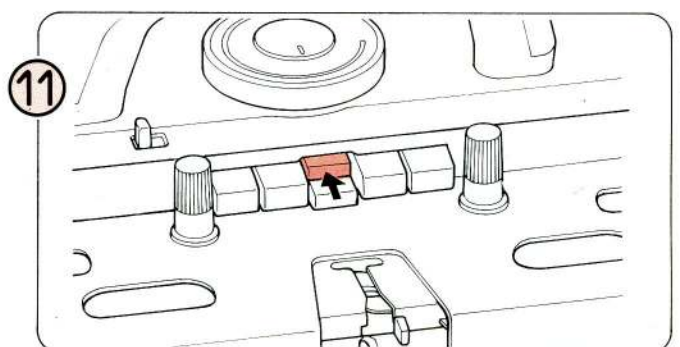
Place the K carriage outside the right turn mark. Push in both part buttons at the same time. Set the change knob to KC.



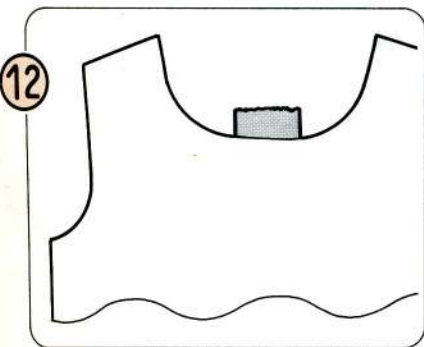
Push the M key. (M lamp light off.)



Move the K carriage from right to left across the right turn mark. The needles are selected according to the pattern row memorised by the M key.



Push the cam buttons according to pattern. Knit part (3) according to your pattern.



The neckline shaping has now been completed.

- M Key
- M
- ○
- M lamp

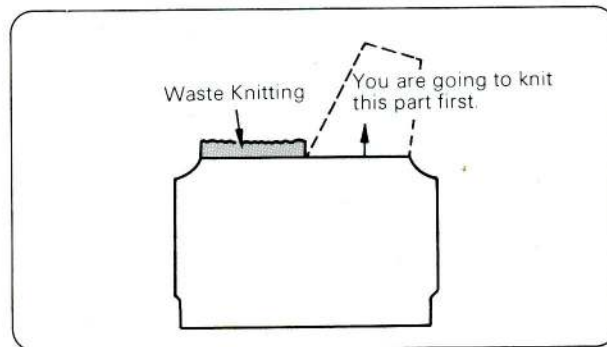
The computer memorises all the data (which needles have been selected, pattern program, the position of the variation keys etc.) in operation on the row at the moment you turn on the M lamp.

- When you subsequently turn the M lamp off, that data is recalled, and your machine then has the same settings as when you turned the M lamp on.
- Step ⑩ selects this row ready for knitting so that you rejoin the pattern where you left it at step ①.
- When the M key is in operation, the information being memorised can be deleted if you decide you won't need it. To cancel the M key memory, push the C key after making sure that the ready lamp is lit. The M lamp will go off.

HOW TO SHAPE A V-NECKLINE

● TAKING PART OF THE KNITTING OFF ONTO WASTE YARN

- When using the holding position to divide your knitting (e.g. for a V-neck) or if you are working with light-coloured yarn, the stitches in holding position may become soiled. To prevent this, take these stitches off onto waste yarn instead of using the holding position.



● STOCKING STITCH AND PLATING

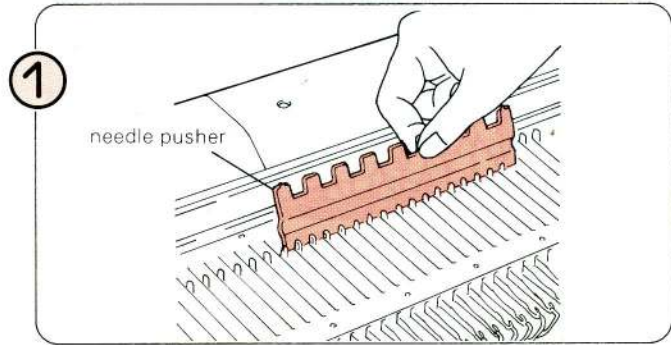
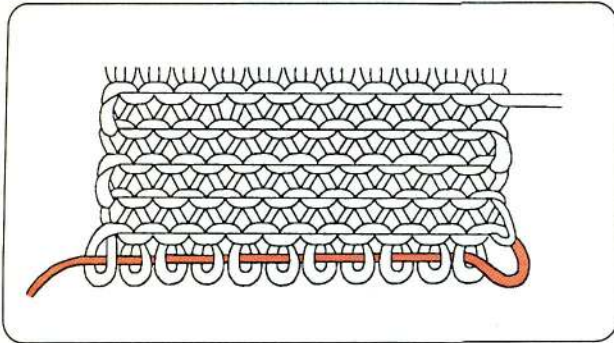
- ① Bring forward the needles into E position for the part you want to knit first.
- ② Set the holding cam lever to H.
- ③ Remove the main yarn from the yarn feeder A and hook it around the edge of the machine.
- ④ Thread the waste yarn into the yarn feeder A and knit about 10 rows. Remove the waste yarn and knit 1 row with the yarn feeder empty to release the knitting.
- ⑤ Return the empty needles to A position.
- ⑥ Move the K carriage across to the main yarn end and thread main yarn into the yarn feeder.
- ⑦ Set the holding cam lever to N.
- ⑧ Knit the first part of the V neck.
- ⑨ Replace stitches from waste knitting back onto the needles using a transfer tool, and put needles in B position.
- ⑩ Knit the second part of the V neck.

● PATTERN KNITTING

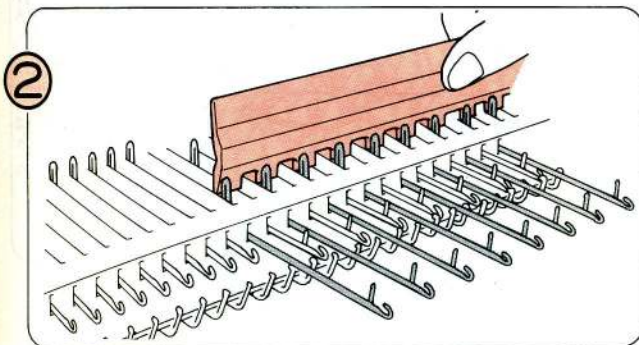
- ① Push the M key. (The M lamp is lit.)
- ② Set the change knob to N.
- ③ Take part of the knitting off onto waste yarn. (Refer to ① — ⑤ in the left column.)
- ④ Return the needles in E position to B position. Use transfer tool to replace stitches into hooks.
- ⑤ Place the K carriage outside the turn mark at the opposite side to the yarn end.
- ⑥ Set the change knob to KC. Push both part buttons. Set the holding cam lever to N.
- ⑦ Push the M key. (The M lamp light goes off.)
- ⑧ Move the K carriage across the turn mark.
- ⑨ Push the M key. (The M lamp is lit.)
- ⑩ Push the cam button according to the pattern.
- ⑪ Thread the main yarn into the yarn feeder and knit the first part of the neck and shoulder.
- ⑫ Set the change knob to N. Place the K carriage outside the turn mark at the opposite side to the first part of the neck and shoulder.
- ⑬ Replace stitches from waste knitting back onto the needles using the transfer tool and place the needles in B position.
- ⑭ Push the M key. (The M lamp light goes off.)
- ⑮ Set the change knob to KC and push both part buttons.
- ⑯ Move the K carriage across the turn mark.
- ⑰ Set the cam buttons according to pattern. Thread up the yarn into the yarn feeder and complete the second part of the neck and shoulder, reversing shapings.

HOW TO CAST ON WITH A FINISHED EDGE (Closed edge cast on)

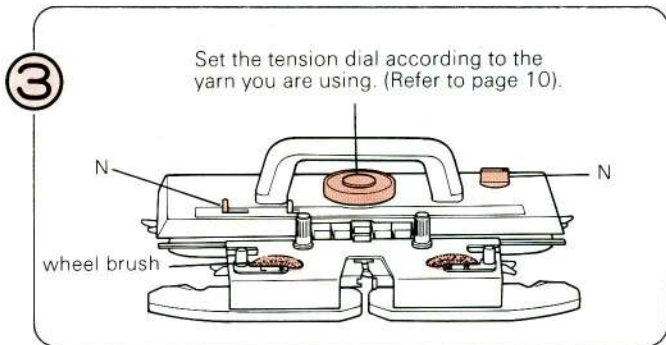
● USING THE WHEEL BRUSH



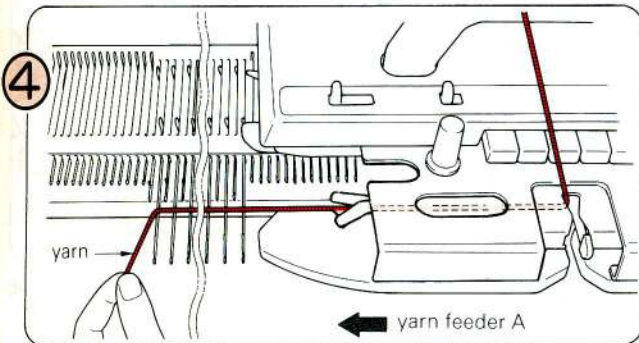
1 Place the K carriage at the right. Using the flat side of the 1/1 needle pusher, bring the needles forward to B position.



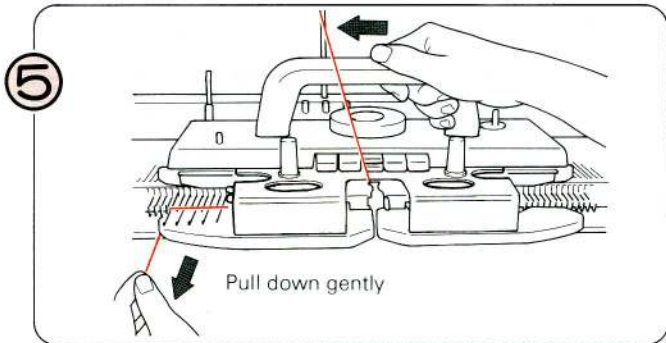
2 Using 1/1 needle pusher, bring forward every other needle to E position.



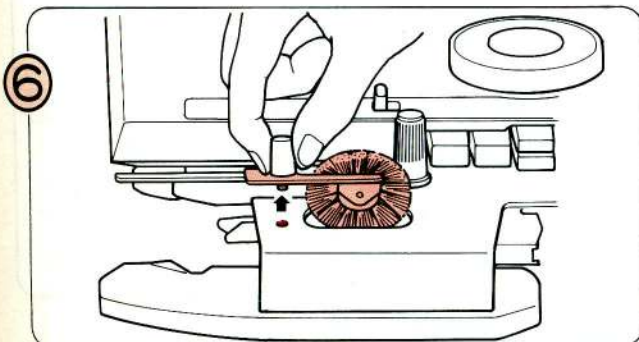
3 Set the tension dial according to the yarn you are using. (Refer to page 10).
 ♣ Set the wheel brushes referring to steps ⑧ — ⑩ on page 77.



4 Thread the yarn into the yarn feeder A. Holding the end of the yarn with your hand, lay the yarn over the selected needles as shown. Hold the end of the yarn as shown in the figure.



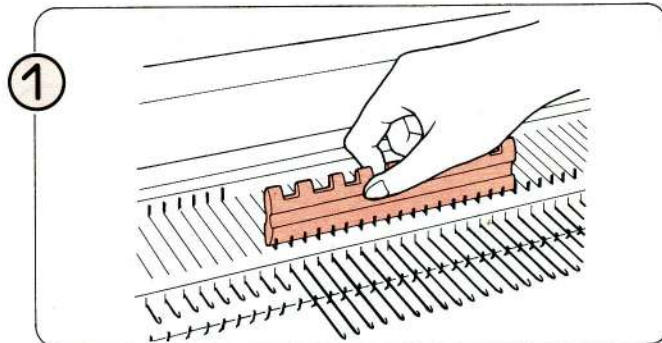
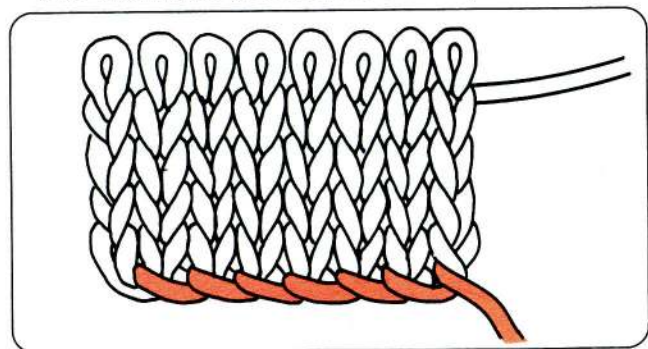
5 Pulling the yarn down gently with the left hand, move the K carriage to knit slowly with right hand. Continue to hold the end of yarn with left hand for a few rows.



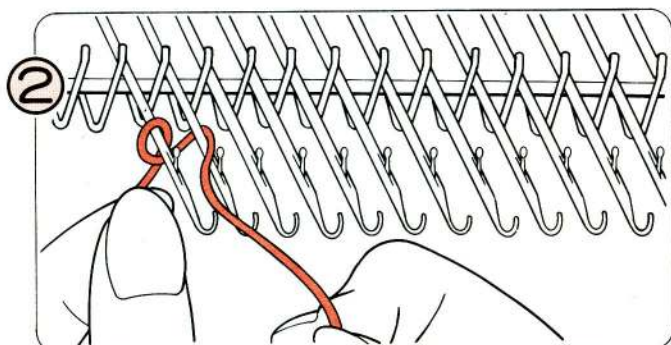
6 Release yarn which was held in left hand, and remove the wheel brushes.

● 'E' WRAP METHOD

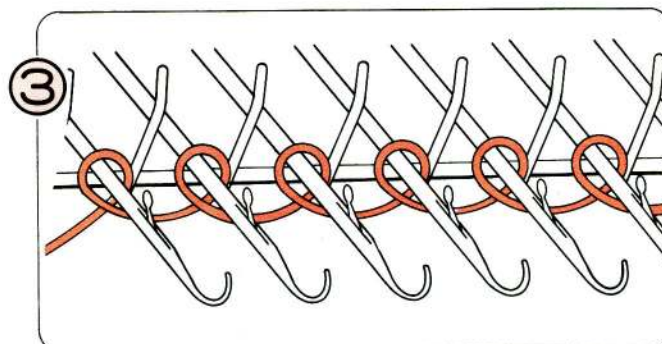
- With this method you will achieve a thin, elastic edge so it is suitable for any type of knitting.



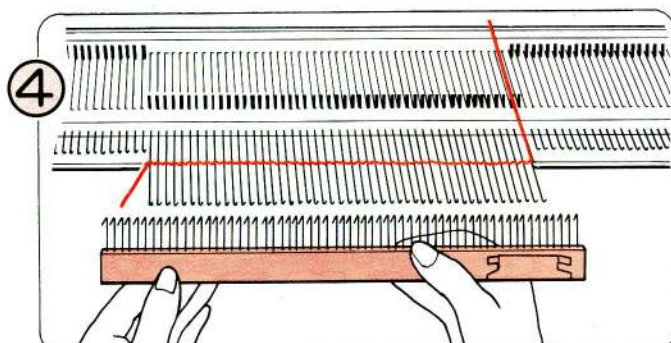
Place the K carriage at the right. Using the flat side of the 1/1 needle pusher, bring the needles forward to E position.



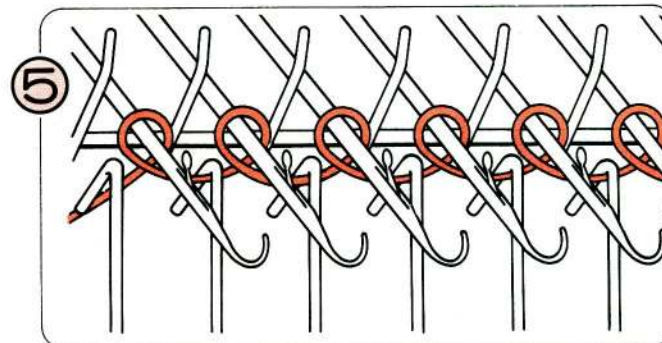
Beginning at the left, and working from left to right, wind the yarn around the needles in an anticlockwise direction. Do not wind the yarn too tight.



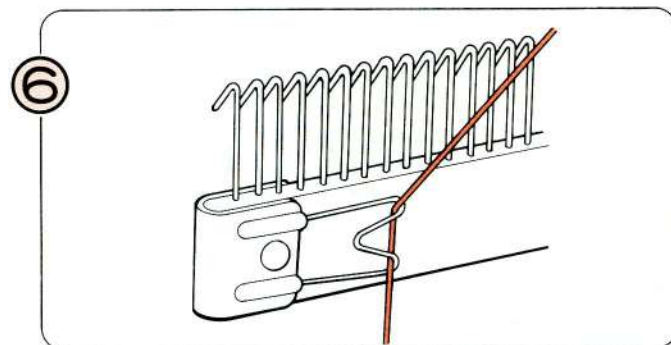
The loops should be behind the latches as shown.



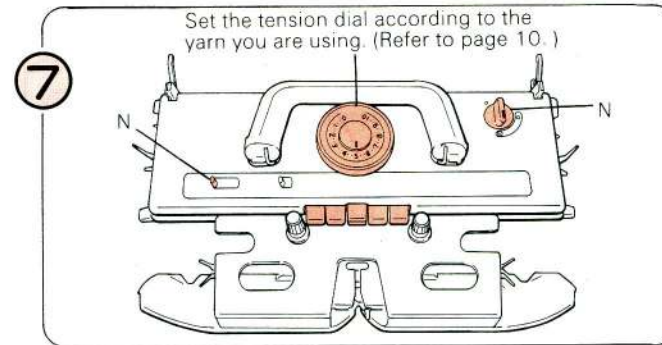
- (1) Take the cast-on comb out of the case and choose the length according to the number of needles. (Refer to page 11.)
- (2) Hold the cast-on comb as shown with the hooks facing the machine.



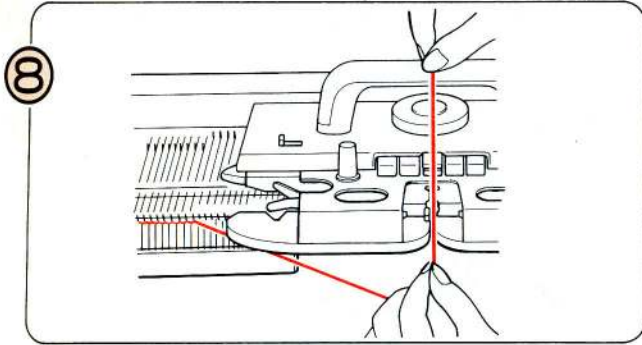
Pull the yarn through the edge hook. Hang the cast-on comb over the loops and gently pull it downwards. Hang the claw weight evenly along the cast-on comb.



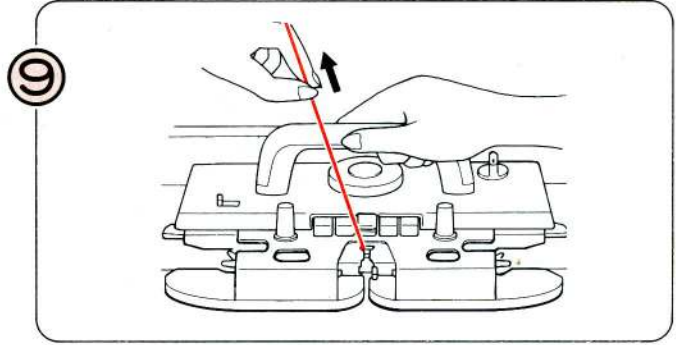
Hook the loose yarn end under the yarn clip from the front.



Set the K carriage as shown above.



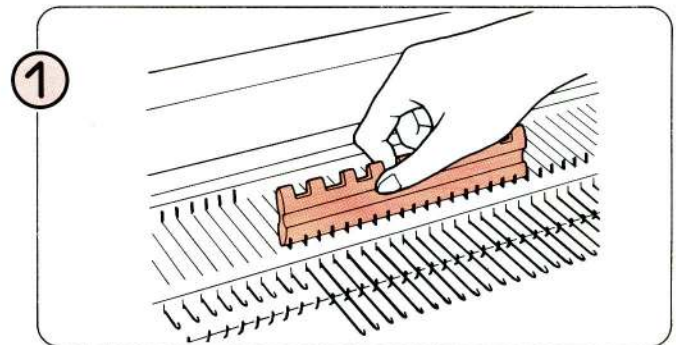
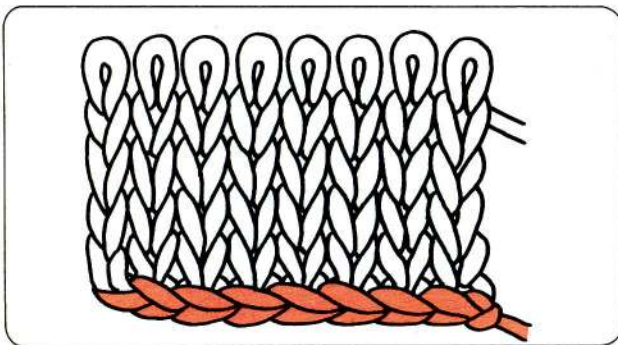
Thread the yarn into yarn feeder A.



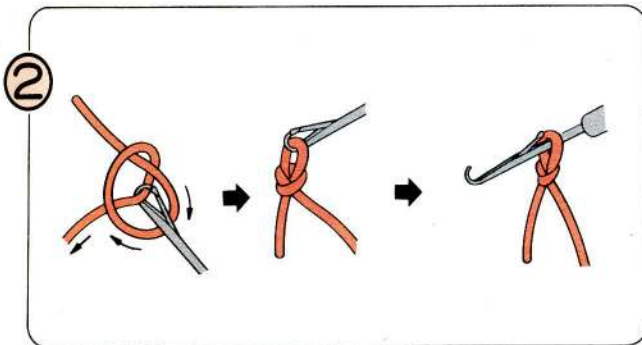
Move the K carriage to the left, holding the yarn as shown so that no loops are formed.

● USING THE LATCHET TOOL

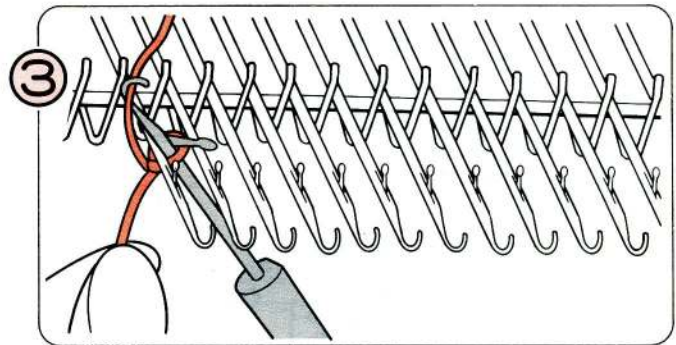
- With this method you will achieve a firm edge which is not very elastic.



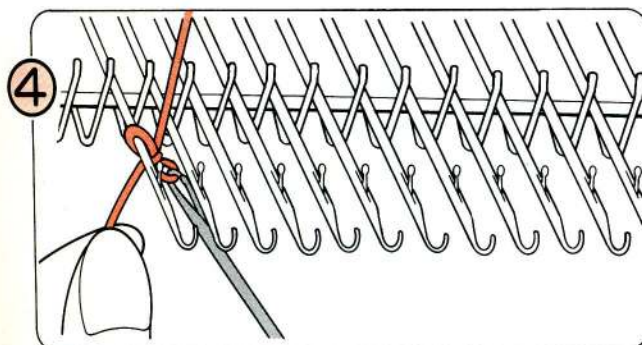
Place the K carriage at the right. Using the flat side of the 1/1 needle pusher bring the needles forward to E position.



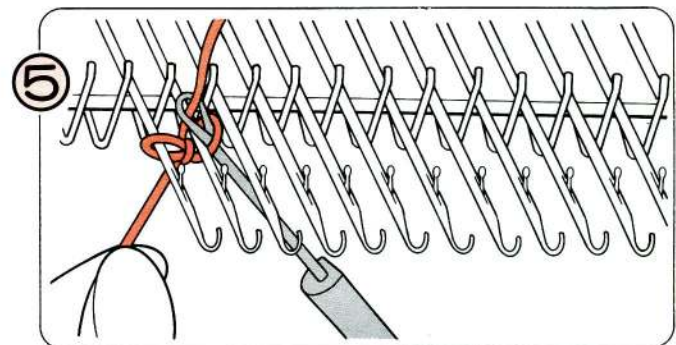
Thread the yarn into the yarn tension unit. Now make a chain stitch using the latchet tool as shown.



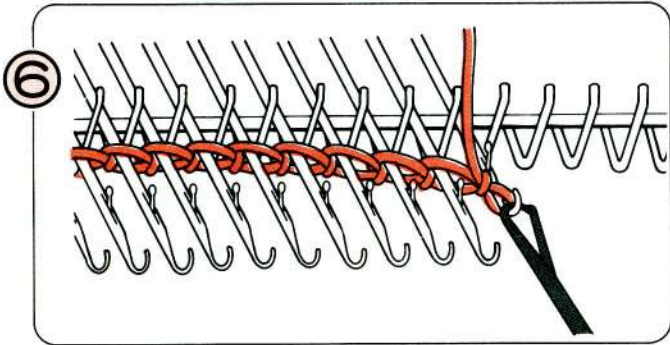
With the loop behind the latch, insert the latchet tool between the first and second needles on the left. Catch the yarn with the latchet tool.



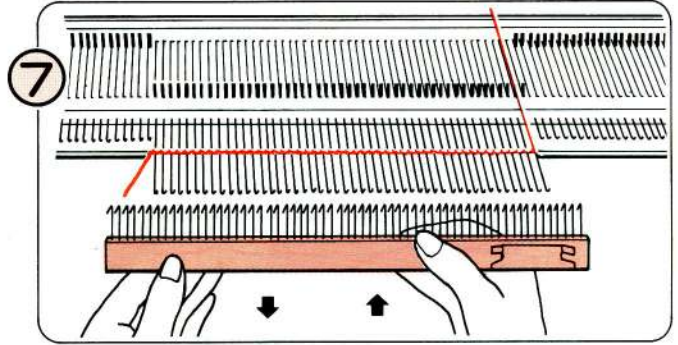
Keeping the yarn in the hook of the latchet tool, pull the yarn down through the chain loop, and slip the loop off the latchet tool. This makes one stitch.



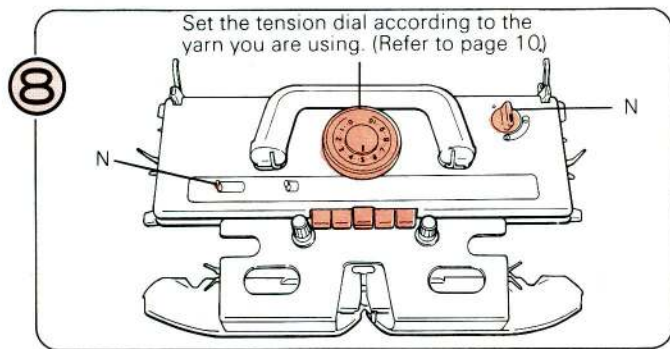
Repeat this across the needles until you reach the last needle.



When you get to the last needle, transfer the loop from the latchet tool into the needle hook.

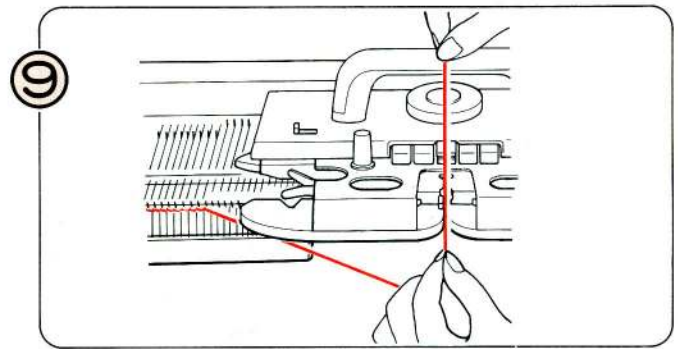


- (1) Take the cast-on comb out of the case and choose the length according to the number of needles. (Refer to page 11.)
- (2) Hold the cast-on comb as shown with the hooks facing the machine. Hang the cast-on comb over the loops and gently pull it downwards.
- (3) Hang the claw weight evenly along the cast-on comb.

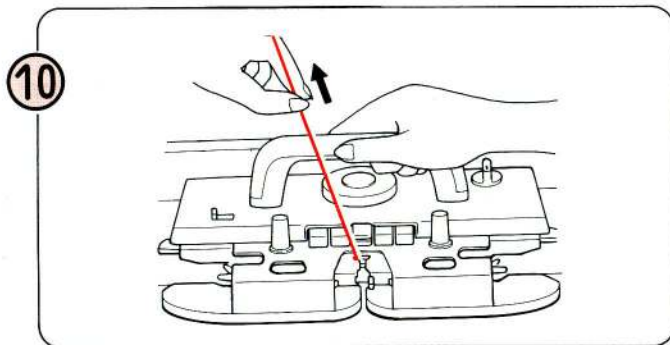


Set the tension dial according to the yarn you are using. (Refer to page 10.)

Set the K carriage as shown above.



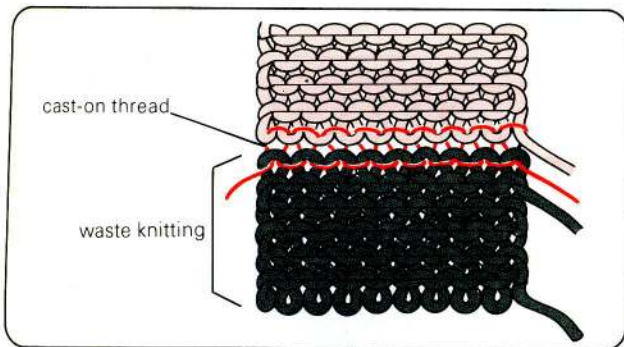
Thread the yarn into yarn feeder A.



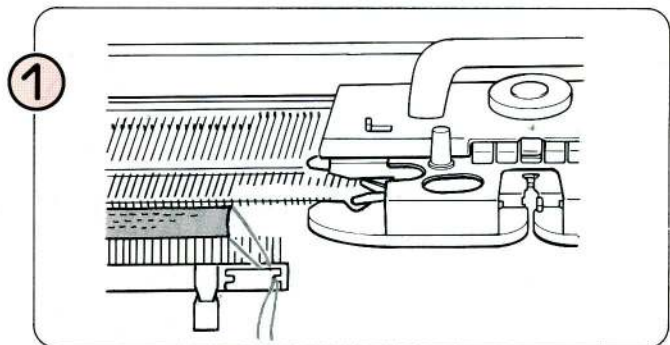
Move the K carriage to the left, holding the yarn as shown so that no loops are formed.

● WASTE KNITTING (CASTING-ON)

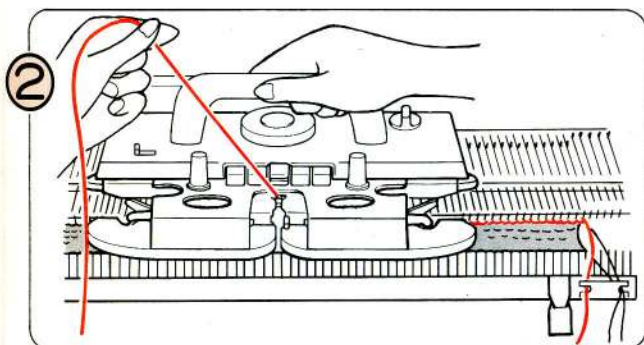
- Waste knitting is the term used to describe knitting that will be removed when the garment is completed, or to enable you to carry out the next step.



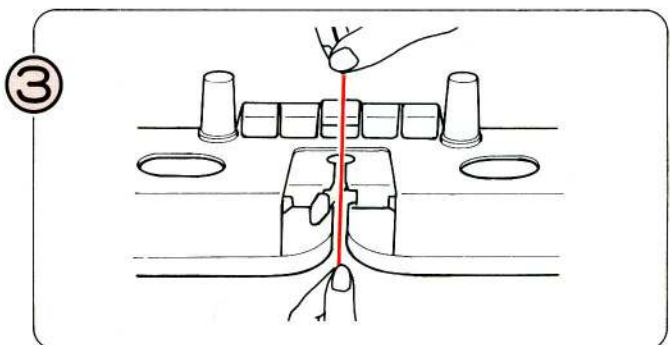
Waste yarn is a smooth yarn in a different colour to that of the main yarn.



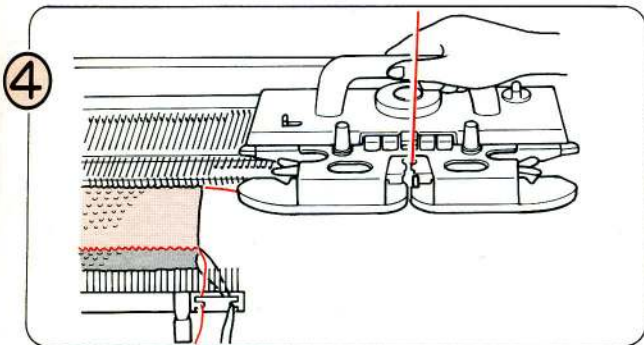
1 Knit about 10 rows in stocking stitch using waste yarn ending with the K carriage at the right of the needle bed. Remove waste yarn from yarn feeder and cut the yarn.



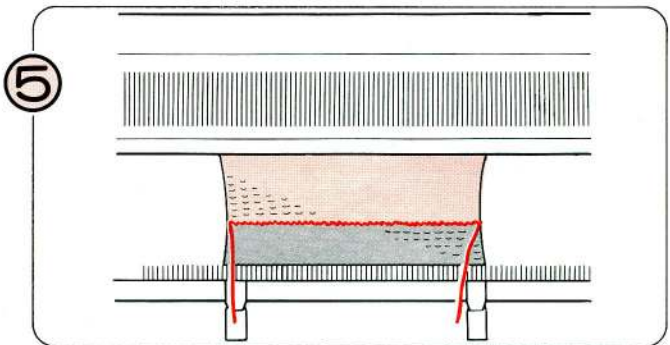
2 Thread the cast-on thread into yarn feeder A. Hold the end as shown and knit one row. Remove cast-on thread from yarn feeder A.



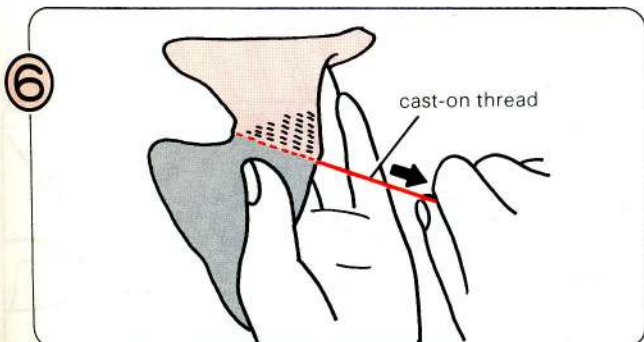
3 Thread the main yarn into yarn feeder A.



4 Knit several rows.



5 One row has been knitted with the cast-on thread and this separates the waste knitting from the main knitting.



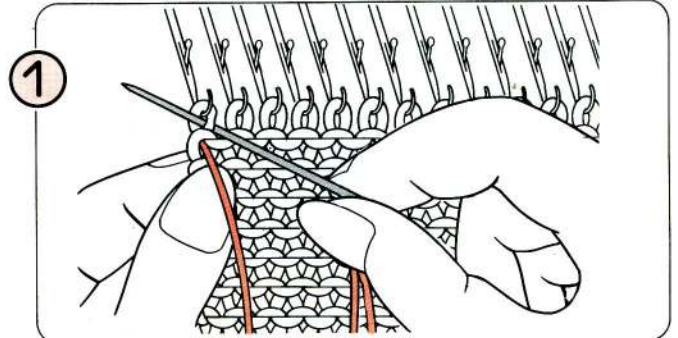
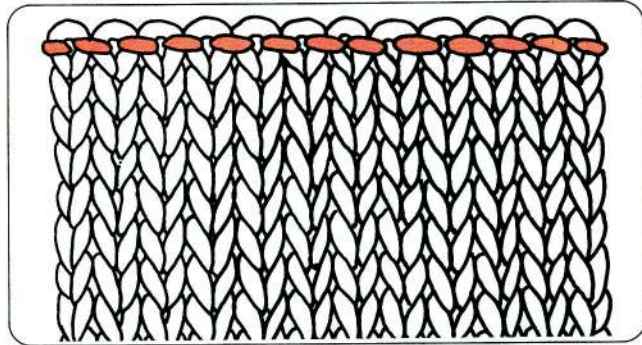
6 If you pull out the cast-on thread, the waste knitting will drop away.

BACKSTITCH CASTING OFF (Binding off)

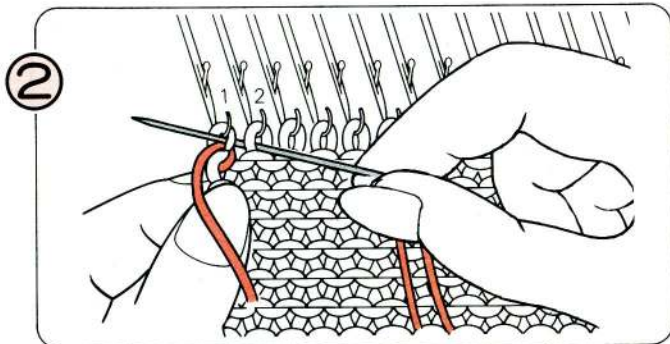
● USING THE TAPESTRY NEEDLE

- With this method you will achieve a thin, elastic edge so it is suitable for any type of knitting.
- The yarn is on the lefthand side. Take yarn out of the yarn feeder and cut it leaving a length three times the width of the knitting.

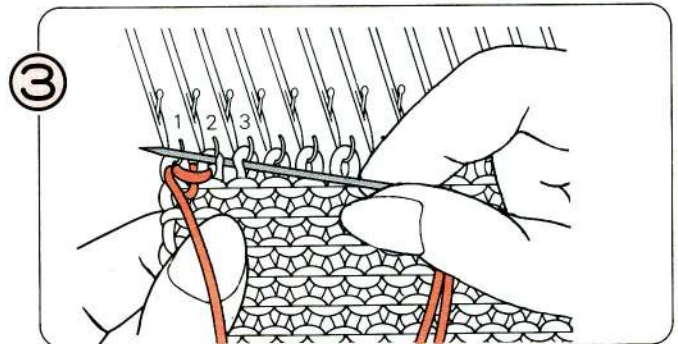
<Ending with K carriage on the left>



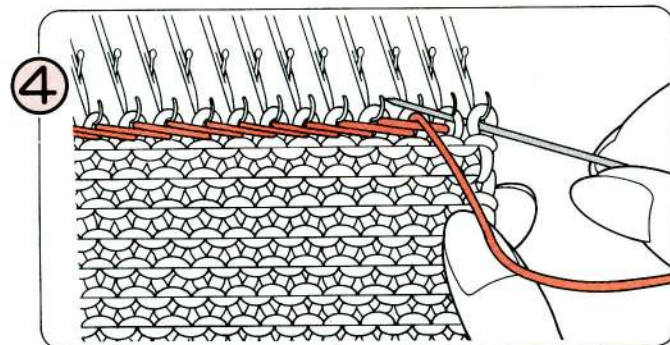
Thread yarn end into a tapestry needle. From the back, pass needle through the first stitch at the left (1).



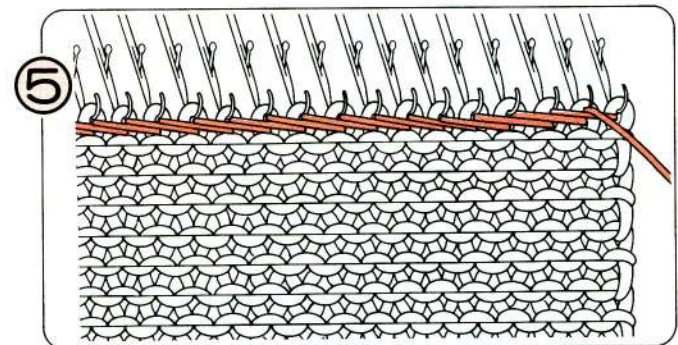
From the front, insert the needle in through the second stitch (2) and back out through the first stitch (1).



From the front, insert the needle in through the third stitch (3) and back out through the second stitch (2).

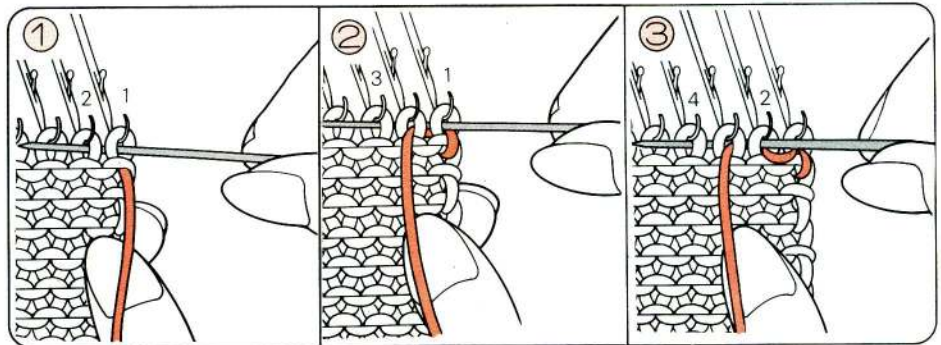
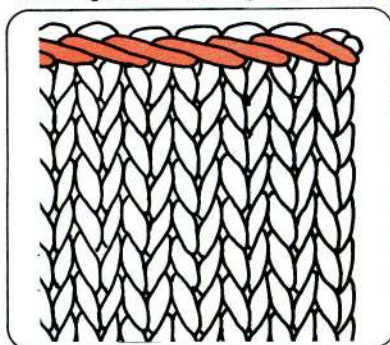


Continue in this way until you reach the righthand edge of the knitting.



The casting off (binding off) is now completed and you can remove the knitting from the machine. If you find it easier, you can remove the stitches a few at a time whilst you work, so that you can place your lefthand behind the knitting.

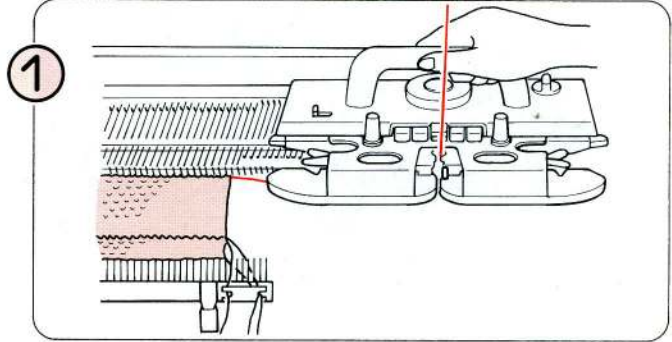
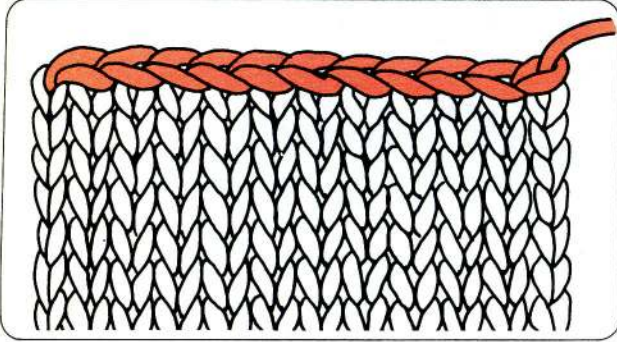
<Ending with K carriage on the right>



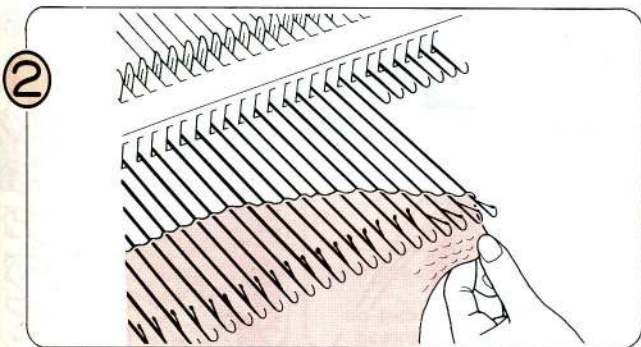
CHAIN STITCH CAST OFF (Binding off)

USING THE LATCHET TOOL

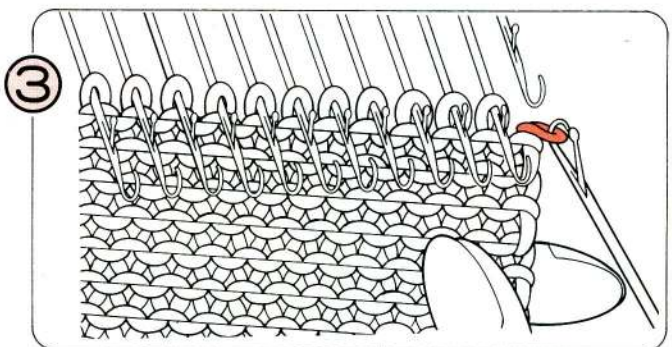
• With this method you will achieve a firm edge which is not very elastic.



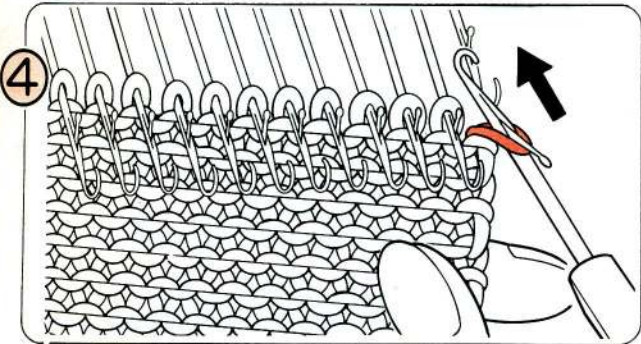
Knit the final row from right to left. Loosen the tension dial for this row (e.g. if main tension is say 4—6, knit the final row at tension 9—10).



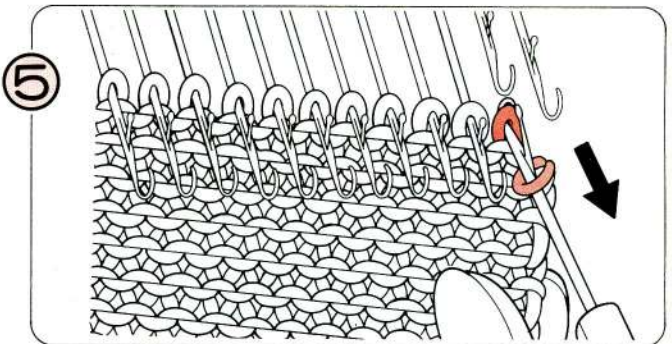
Bring the needles forward to E position. Gently bring the knitting towards you, taking care not to drop any stitches.



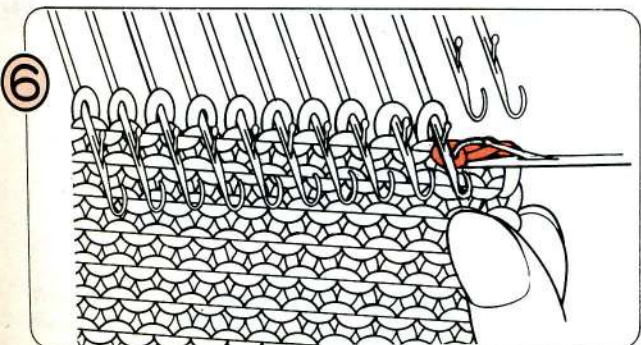
Beginning at the righthand edge, hook the first stitch onto the latchet tool.



Put the stitch behind the latch of the latchet tool.

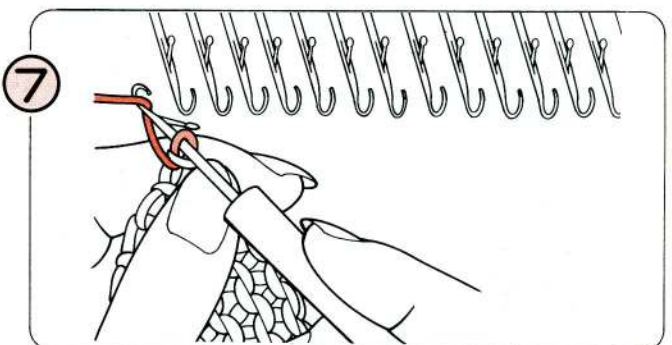


Now hook the second stitch with the latchet tool, keeping this stitch in the hook.



Draw the second stitch through the first stitch, letting the first stitch slip off over the hook.

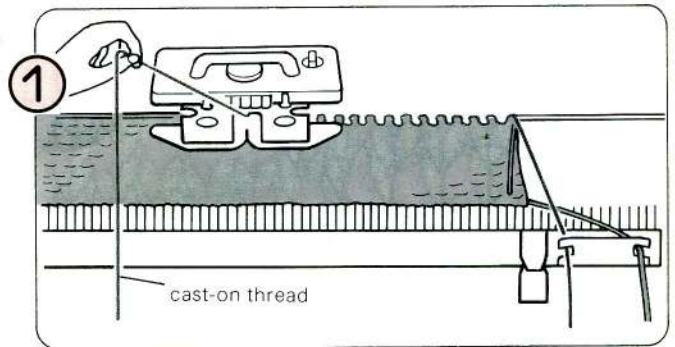
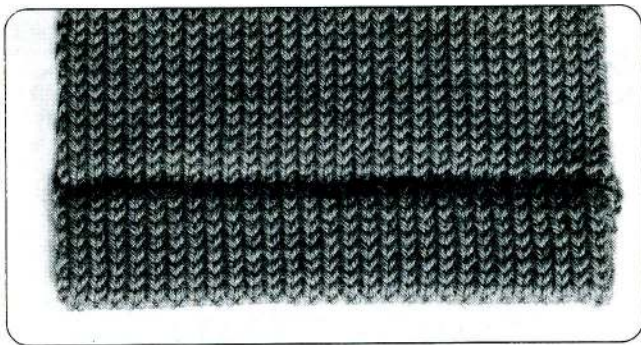
♣ Take care not to drop any of the other stitches from off the needles while you work.



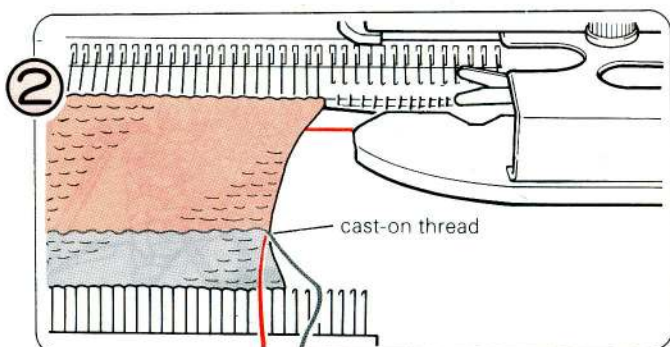
Repeat this until you reach the last stitch. Now hook the yarn end with the latchet tool as shown, and pull this through the last stitch.

HOW TO MAKE A HEM

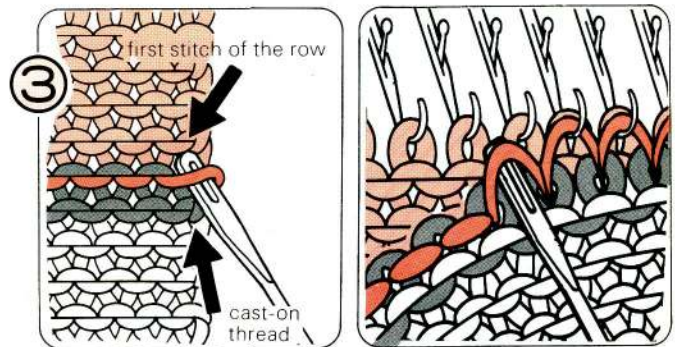
PLAIN HEM



Knit several rows with waste yarn and then knit one row with the cast-on thread. (Refer to page 112.)

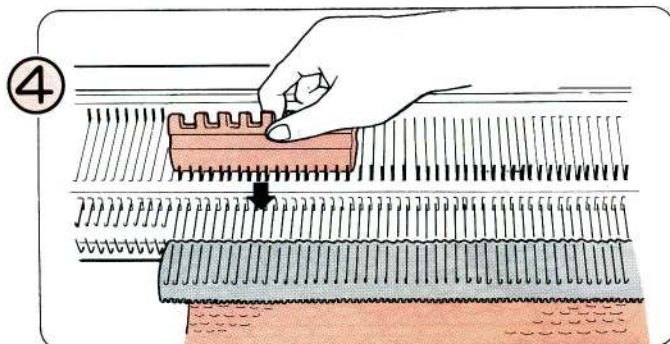


Working in stocking stitch, knit the number of rows required for double the depth of the hem (e.g. if hem is to be folded under 2.5 cms (1") then knit 5 cms (2")).

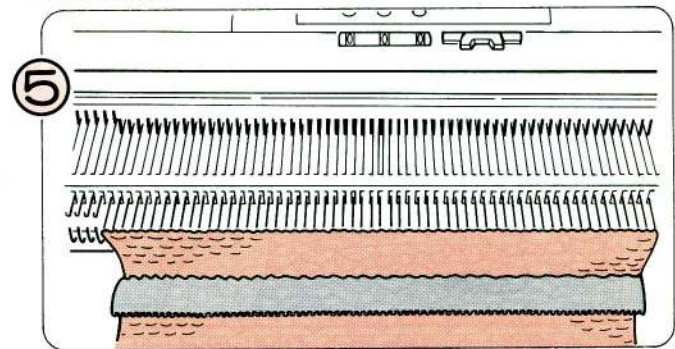


Using your transfer tool, pick up the first stitch of the row above the cast-on thread. Continue picking up stitches across the row.

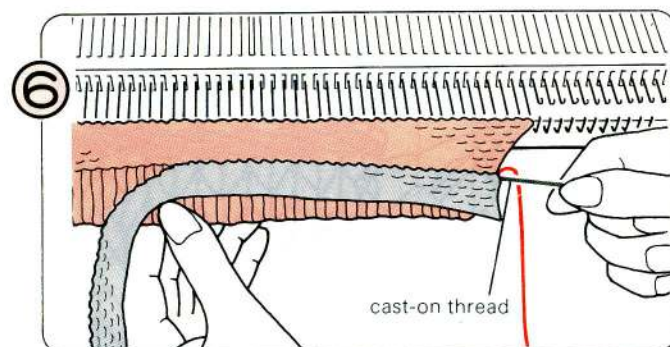
(Note: there will be one less stitch to be picked up than there are needles).



After you have picked up all the stitches, bring the needles forward to E position.



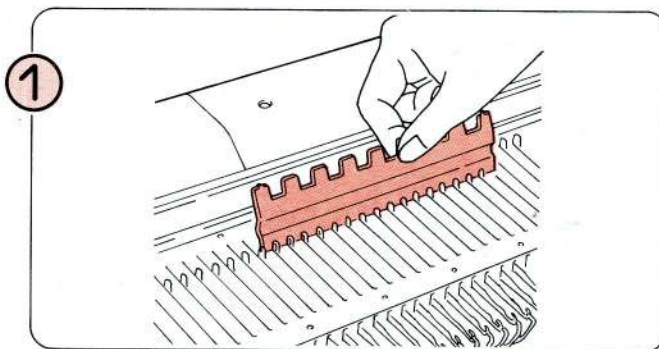
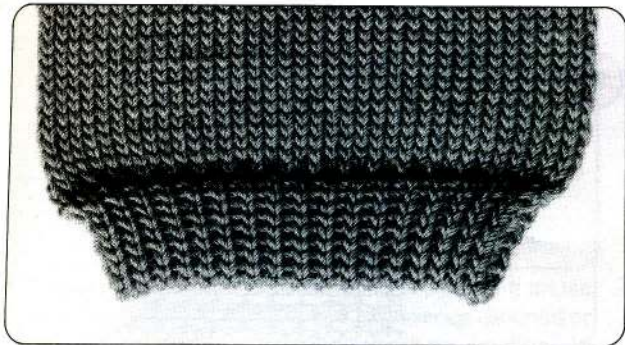
Knit one row with the K carriage. Continue knitting in stocking stitch.



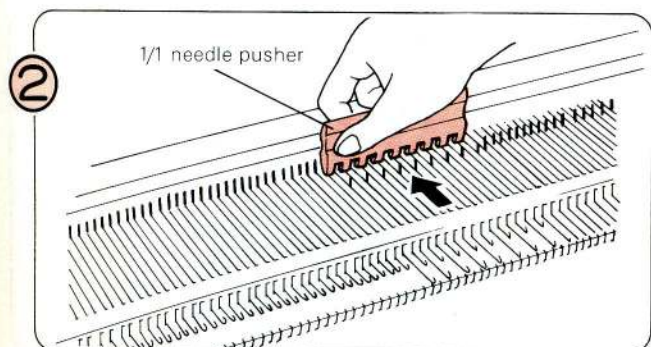
When you have knitted several rows you can pull out the cast-on thread. The waste knitting will fall away.

1 x 1 ELASTIC HEM

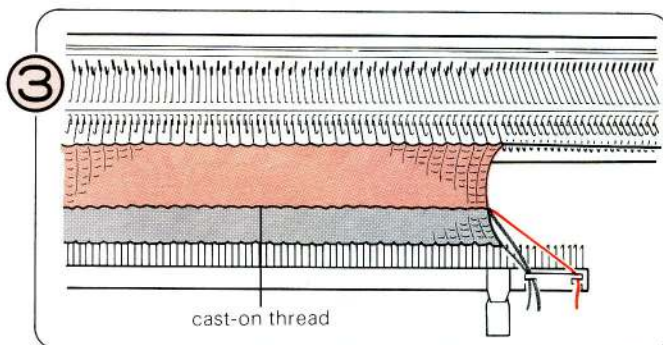
(This type of hem is also referred to as "Mock Ribbing" or "Continental Ribbing")



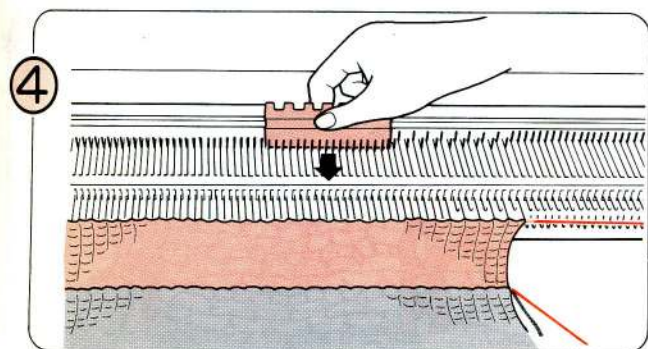
Using the flat side of the 1/1 needle pusher, bring forward the required number of needles to B position.



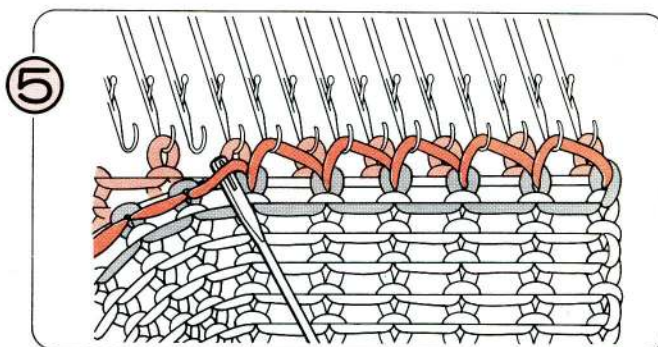
With the 1/1 needle pusher take every other needle back to A position.



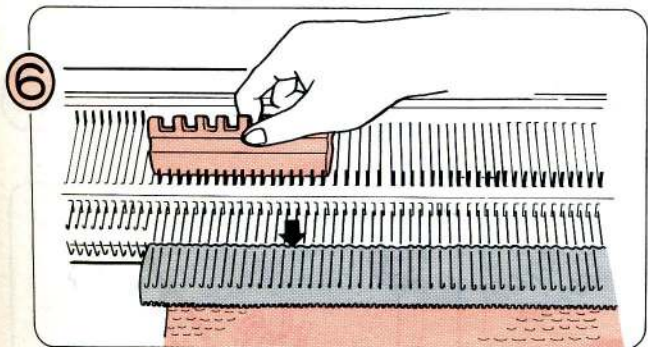
Knit several rows with waste yarn, then one row with the cast-on thread. With main yarn, working in stocking stitch, knit the number of rows required for double the length of the hem.



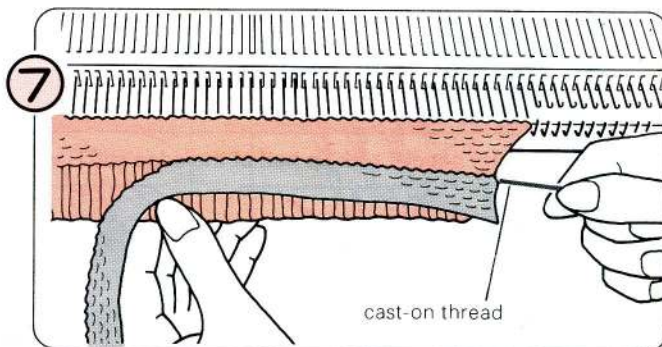
With the flat side of the 1/1 needle pusher, bring the needles in A position forward to B position.



Pick up the stitches in the same way as for the plain hem, and hook them onto the empty needles.

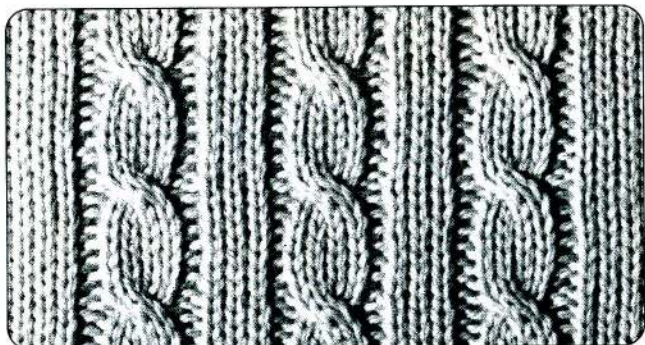


When all the stitches have been picked up, bring the needles forward to E position. Knit one row.

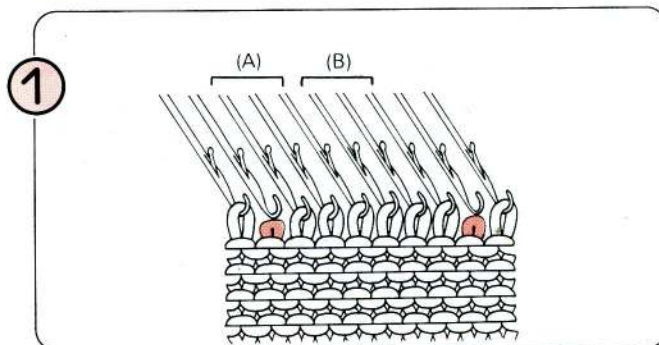


After you have knitted several rows, pull out the cast-on thread. The waste yarn drops away.

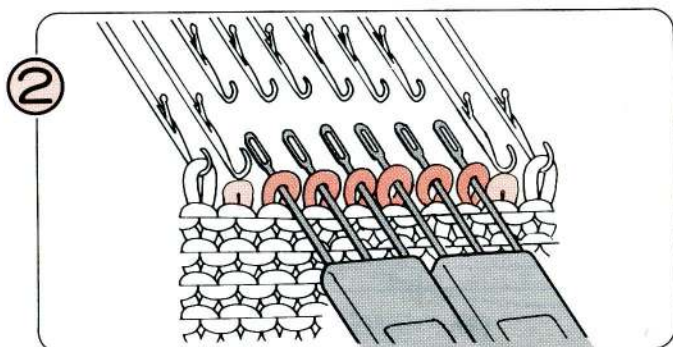
CABLE STITCH PATTERN



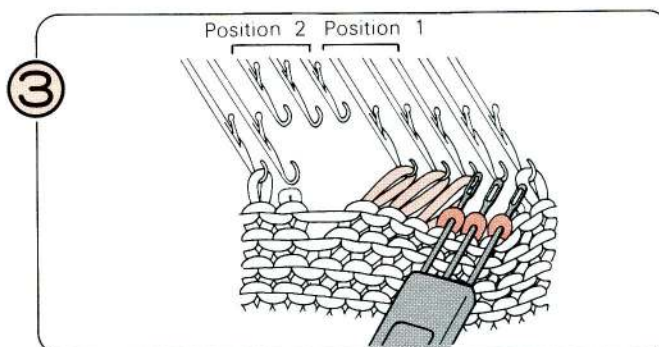
- Cables are made by crossing two sets of stitches using two transfer tools.
- The following example uses two 3-eyed transfer tools.



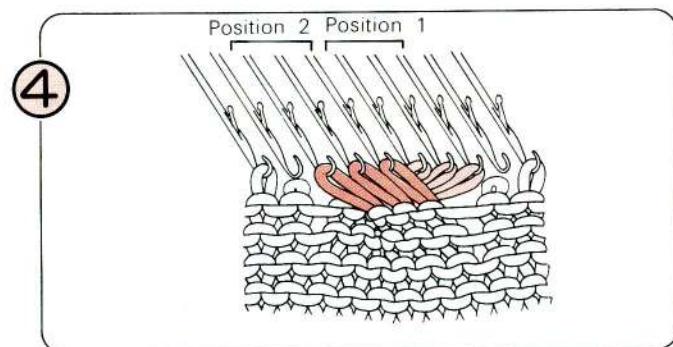
Knit until you reach the point for your first cable crossover. Drop one stitch on either side of the cable pattern stitches.



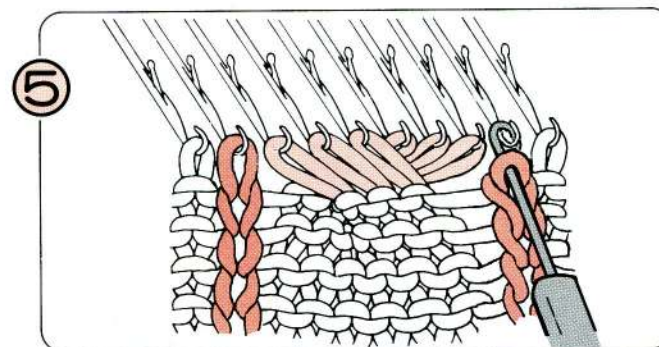
Transfer 3 stitches onto both 3-eyed transfer tools as shown.



Transfer the stitches marked (A) to position 1.



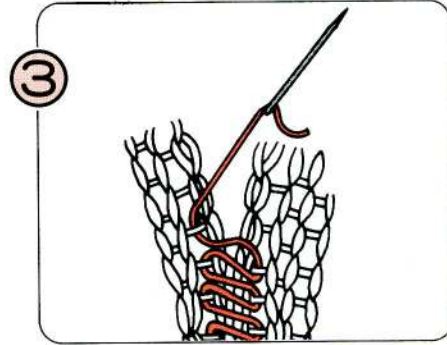
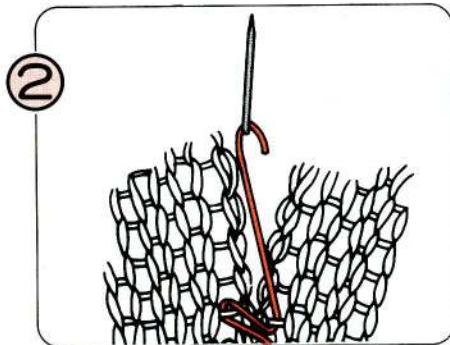
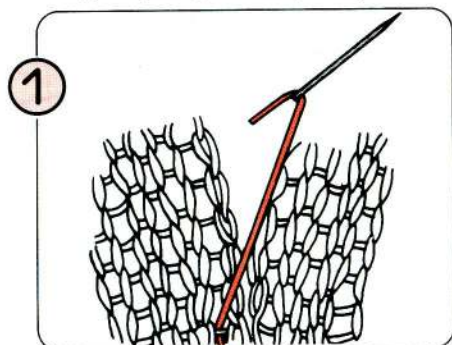
Transfer the stitches marked (B) to position 2.



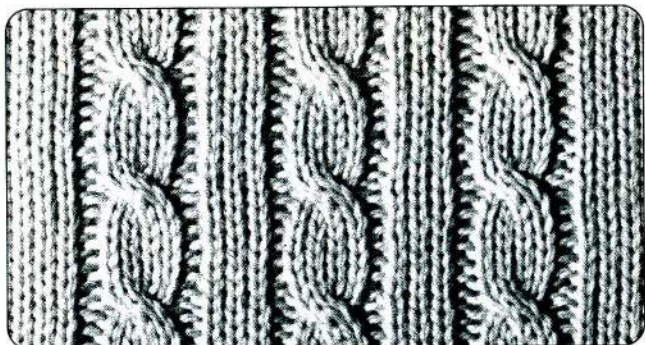
Allow the stitches on either side of the cable which you dropped in Step ①, to ladder down, and using the latchet tool reform them into purl stitches.

SEAMING

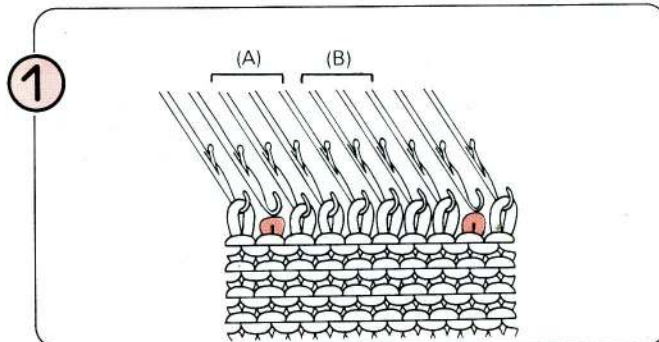
Using a tapestry needle, pick up half of the edge stitch as shown below.



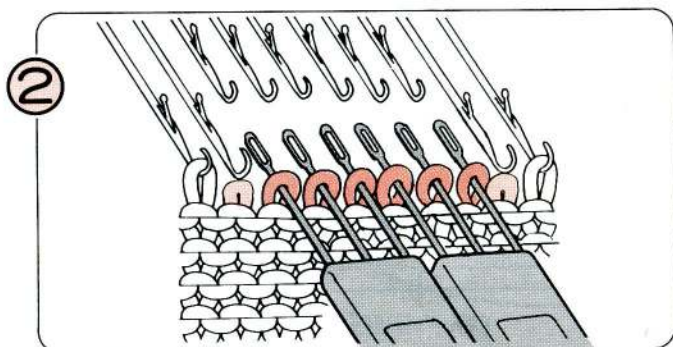
CABLE STITCH PATTERN



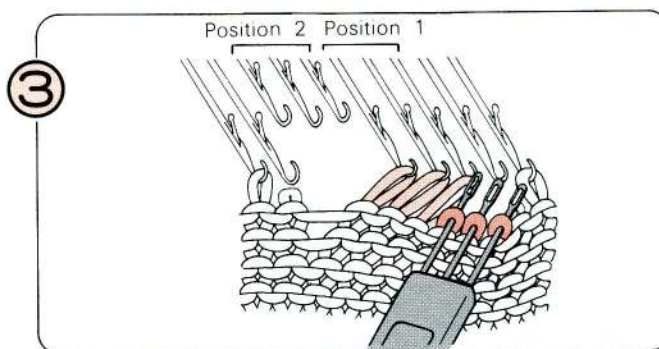
- Cables are made by crossing two sets of stitches using two transfer tools. The following example uses two 3-eyed transfer tools.



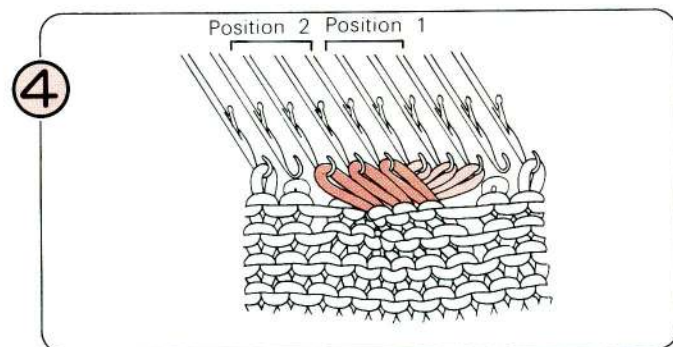
Knit until you reach the point for your first cable crossover. Drop one stitch on either side of the cable pattern stitches.



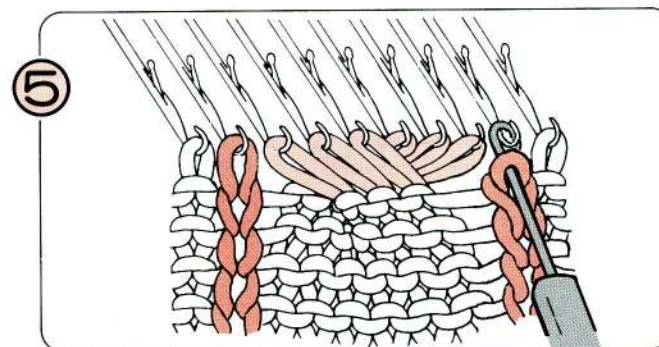
Transfer 3 stitches onto both 3-eyed transfer tools as shown.



Transfer the stitches marked (A) to position 1.



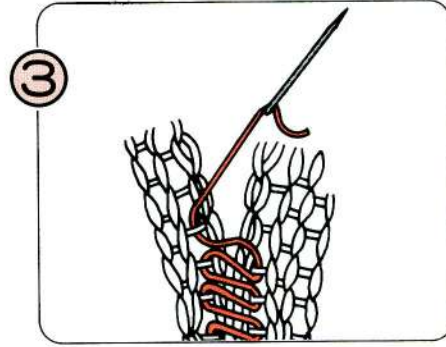
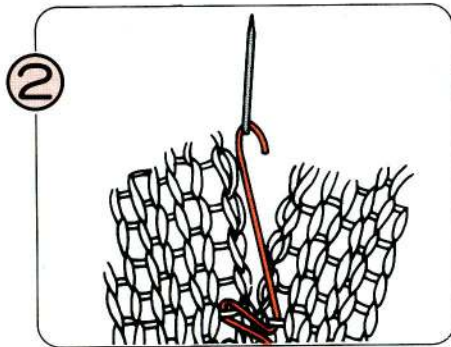
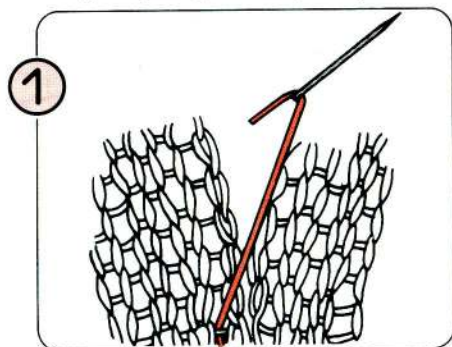
Transfer the stitches marked (B) to position 2.

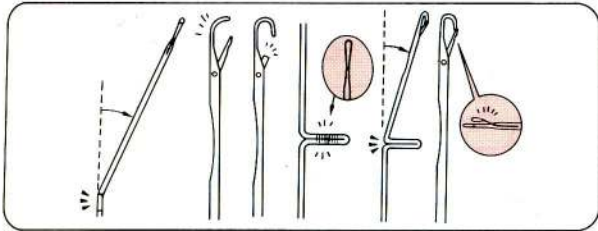


Allow the stitches on either side of the cable which you dropped in Step ①, to ladder down, and using the latchet tool reform them into purl stitches.

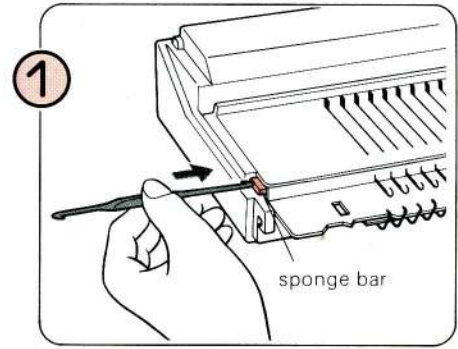
SEAMING

Using a tapestry needle, pick up half of the edge stitch as shown below.

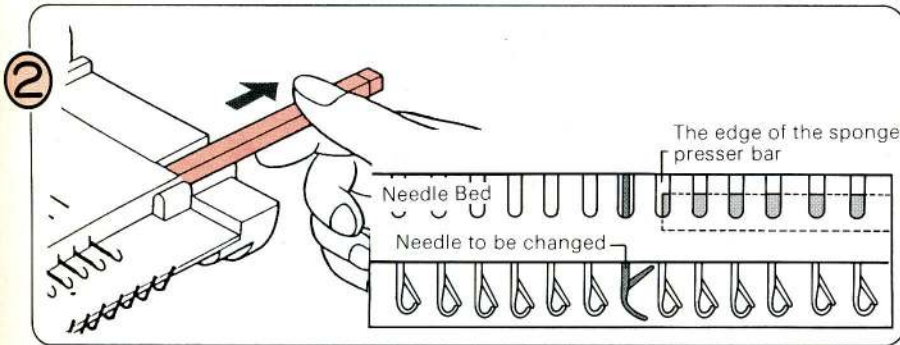




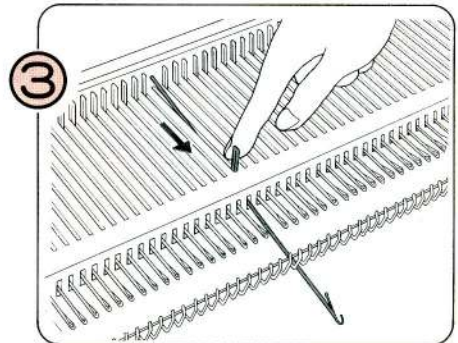
• Needles that are bent, broken or damaged will cause problems during knitting. If you experience dropped or badly knitted stitches you should check the needles and replace any faulty ones immediately. In an emergency if you have no spare needles, use one from the extreme edge of the needle bed.



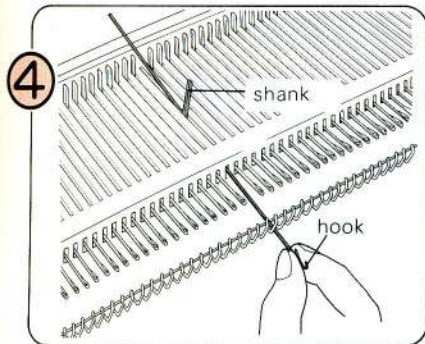
1 Push the sponge bar with the handle of the Crochet Hook.



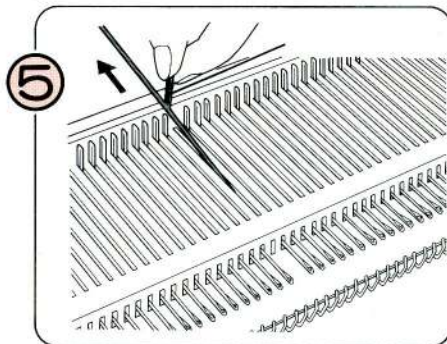
2 Draw the bar out by hand until it passes the needle to be replaced.



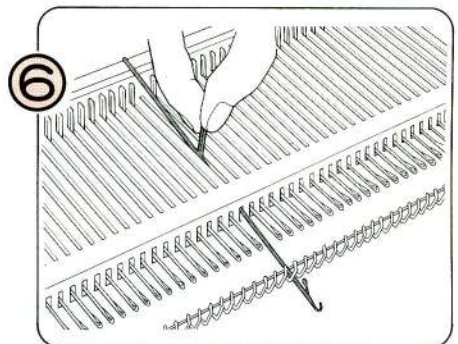
3 Push the faulty needle forward to E position as far as it will go.



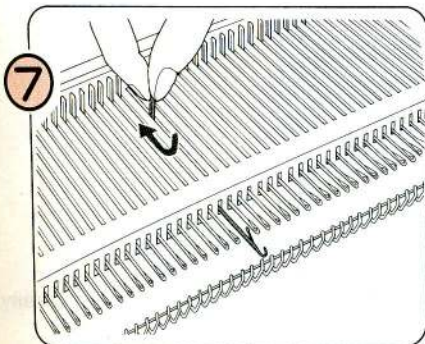
4 Press down at the hook end so that the shank end of the needle is raised clear of the needle bed.



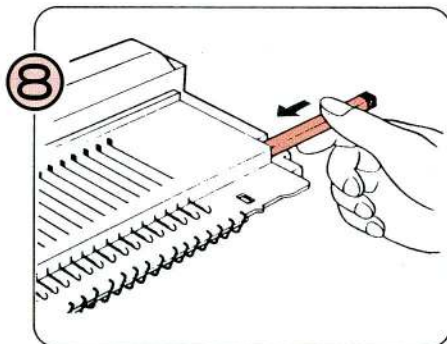
5 Catch hold of the shank end and lift the faulty needle out from the needle bed.



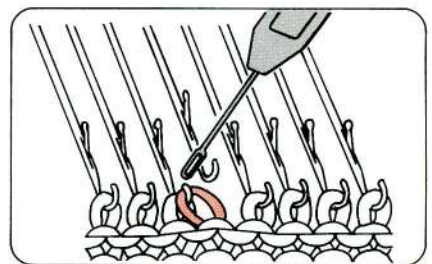
6 With the latch open, insert the new needle as shown.



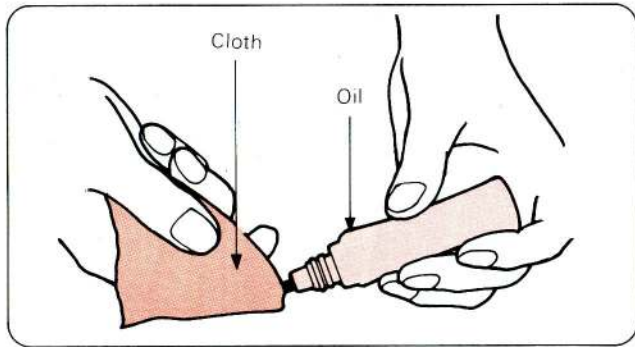
7 Return needle to A position.



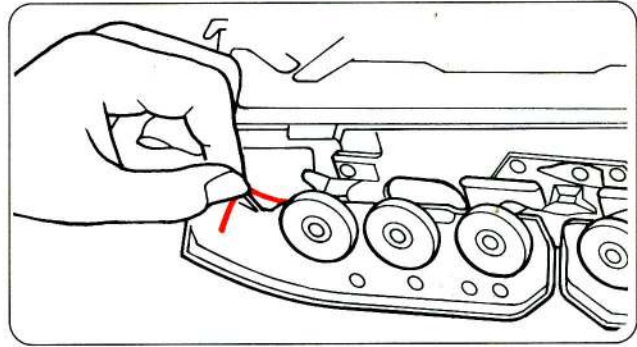
8 Push the sponge bar back.



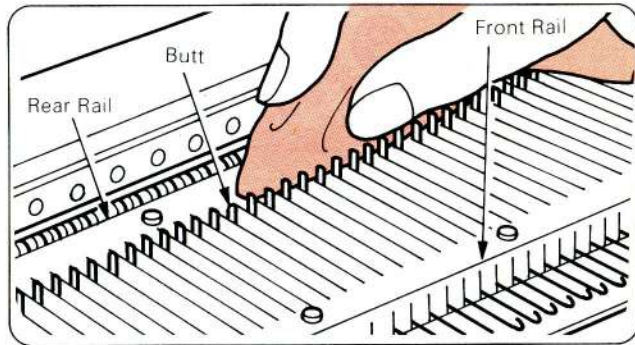
♣ If you need to replace a needle whilst you have knitting on the machine transfer the stitch from the faulty needle onto an adjacent needle. Replace the stitch after you have completed the replacement.



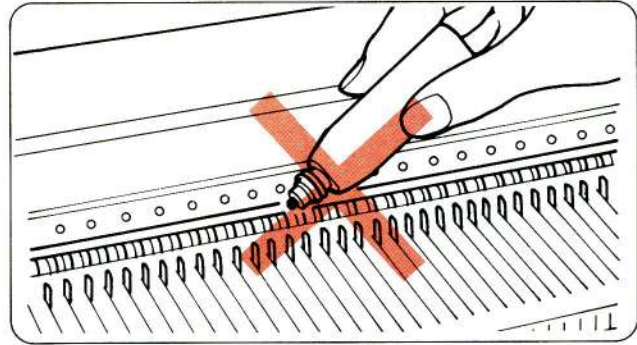
Wipe the metal parts with an oily cloth and clean plastic parts with a soft cloth and mild, neutral detergent.



Remove the K carriages from the needle bed and brush away any dust or fluff. Check that the brushes are free from fluff or strands of yarn, and that they revolve smoothly.

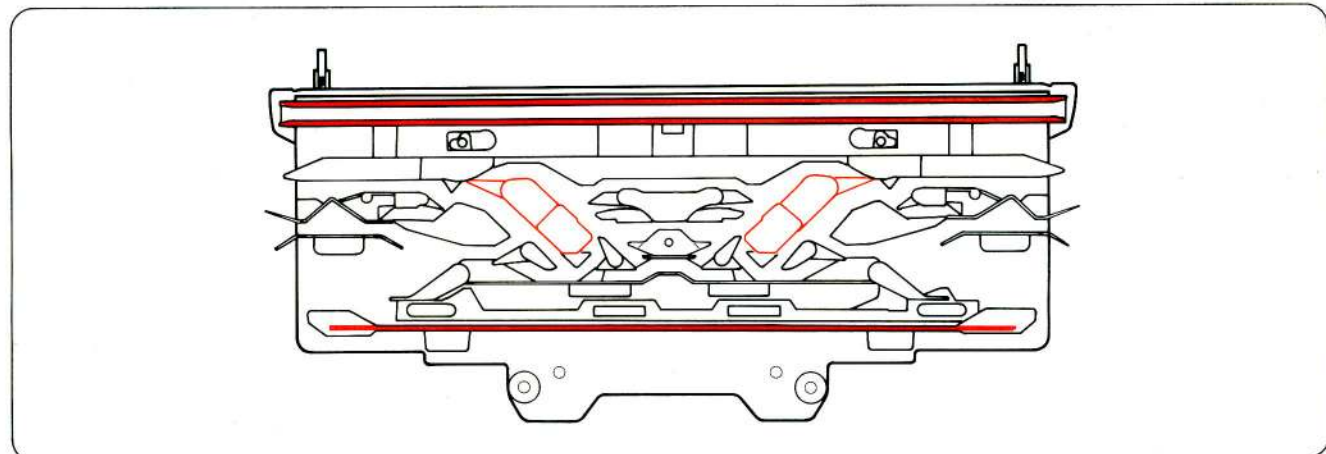


Arrange all needles in B position and clean the butts, rear and front rails as shown, using an oily cloth.



Do not put oil directly onto the machine.

Do not use alcohol, benzin, thinners or petrol.



Should the K carriage feel heavy to operate, you should clean and lubricate the areas indicated above, using an oily cloth. If you regularly clean and lightly oil your machine it will make knitting easier and help to prevent excessive wear.

♣ When you come to use your machine again after you have stored it for a while, knit 20—30 rows with waste yarn to clean away any dirty oil.