

# INSTRUCTION BOOK

AUTOMATIC YARN CHANGER  
YC-5



**WE THANK YOU FOR PURCHASING OUR AUTOMATIC  
YARN CHANGER YC-5.**

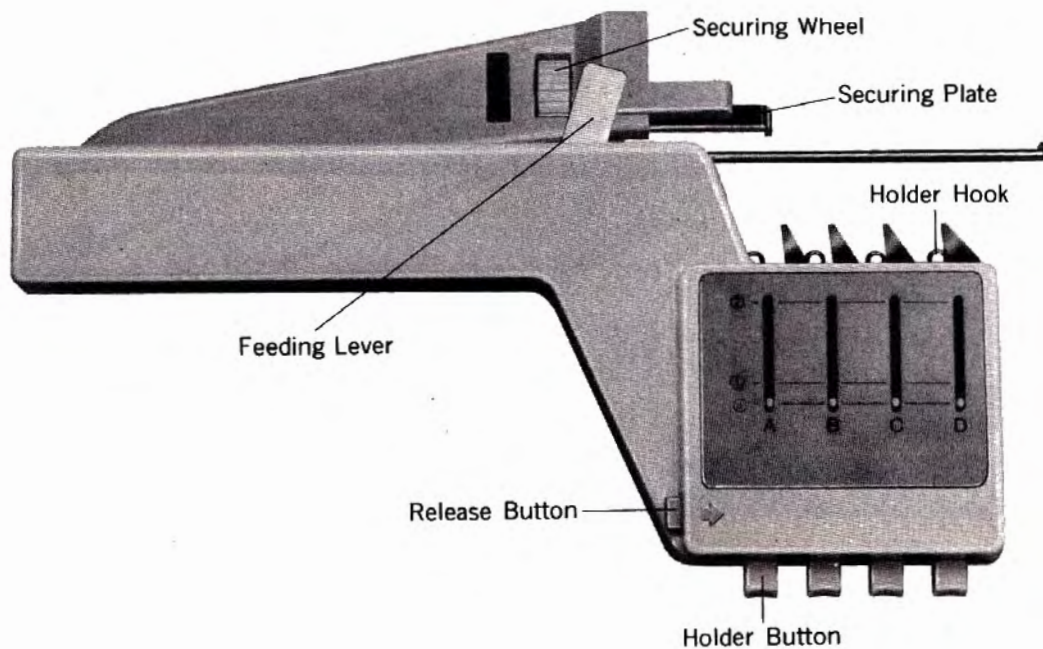
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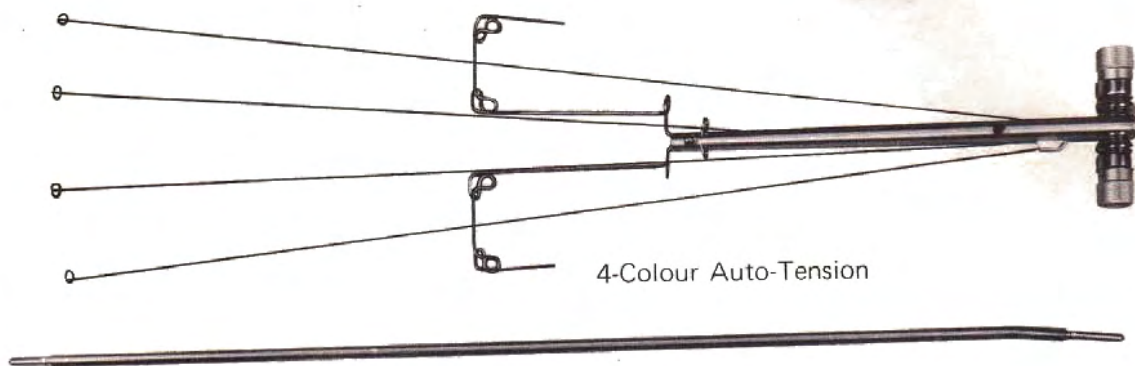
# 1. NOMENCLATURE OF PARTS AND THEIR FUNCTIONS

## \* Automatic Yarn Changer \*



- Securing Wheel . . . . . Used to mount or dismount the Yarn Changer.
- Feeding Lever . . . . . While knitting, this Lever moves back and forth automatically bringing each of the Holders from the ① to the ② and back.
- Holder Hook . . . . . Catches one of four colour yarns.
- Holder Button . . . . . Selects one of knitting yarns.
- Release Button . . . . . Used to return the Holder Button to the ①.
- Positions of the Holder . . . . ② . . . . Holds the yarn in the Yarn Feeder.  
 ① . . . . Position of the Holder having the yarn to be knitted next.  
 ① . . . . Position of the Holder having the resting yarn.

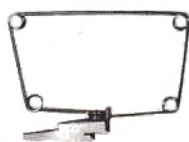
**\* Accessories \***



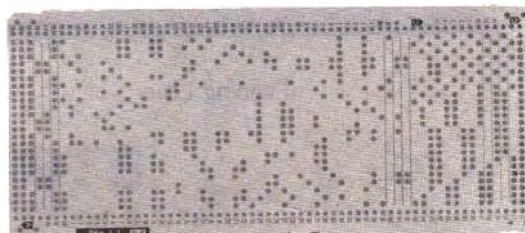
4-Colour Auto-Tension



Yarn Rod (for the YC)



Tension Guide (for the YC)



Punch Cards (10 sheets)



End Stitch Holder

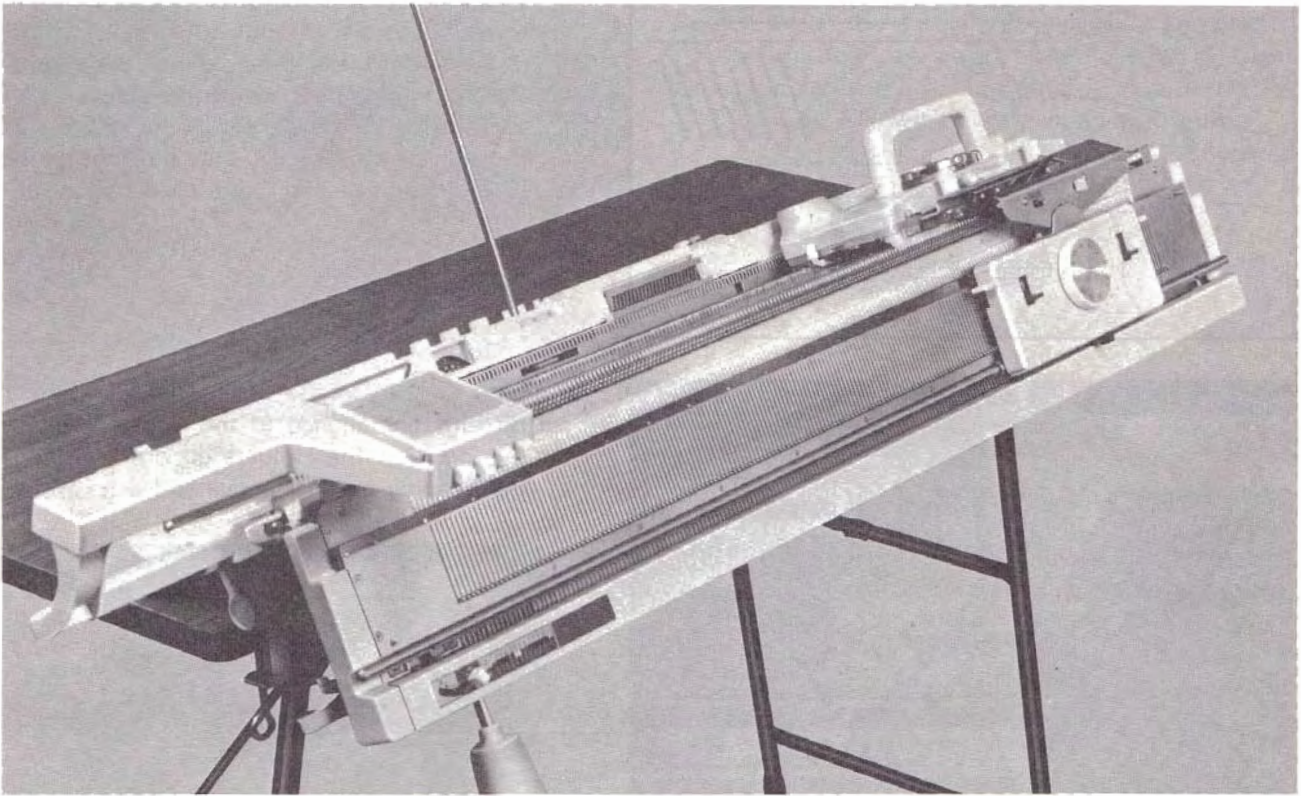


Check Card

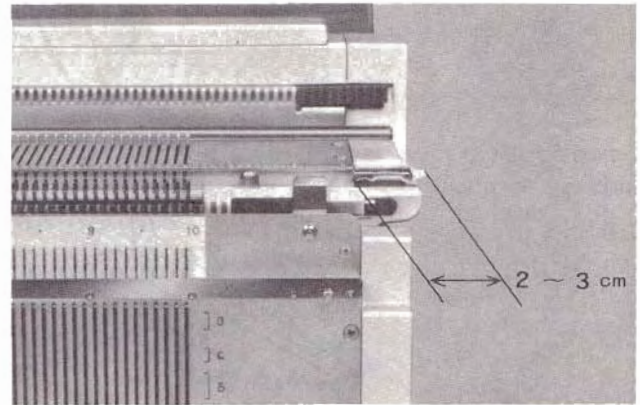
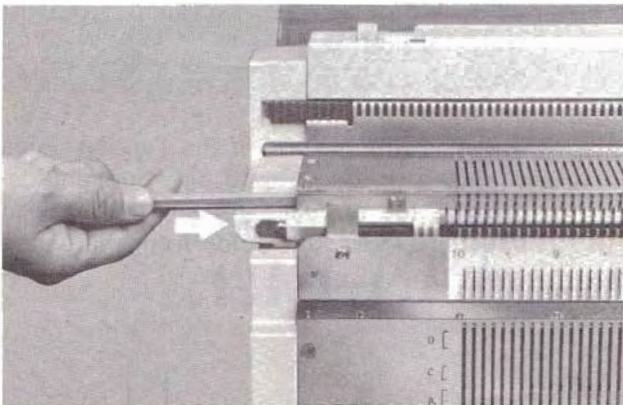
- 4-Colour Auto-Tension . . . . Adjusts the tension of yarn automatically.
- Yarn Rod . . . . . Holds the 4-Colour Auto-Tension.
- Tension Guide . . . . . To be attached to the Yarn Rod.
- Punch Card . . . . . Used for double jacquard knitting.
- Check Card . . . . . Used to read pattern on the Punch Card or to locate misperforation on the Card designed originally.
- End Stitch Holder . . . . . Used when knitting on the Knitter only with the Ribber connected.



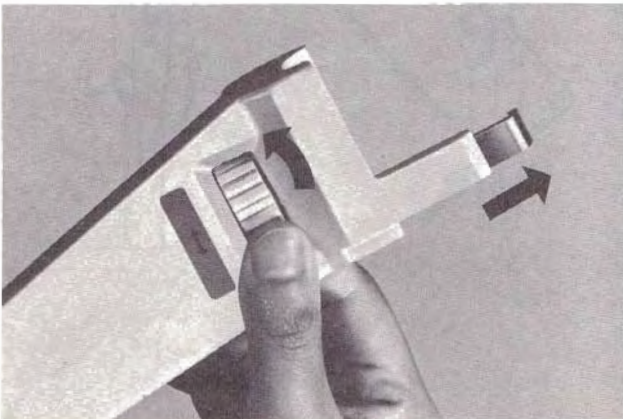
## 2. SET THE AUTOMATIC YARN CHANGER



Couple the Ribber to the Knitter and install the YC as above.

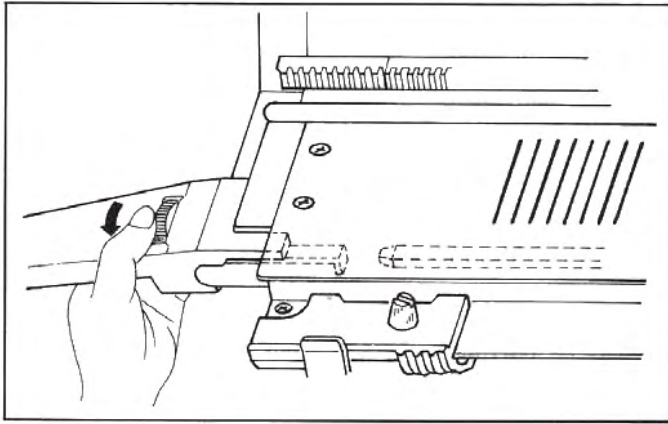


(1) Push, using a screw driver or a pencil, the Needle Retainer from the left side of the Knitter Needle Bed, until you can see the right end of the Needle Retainer protruding 2–3 cms.

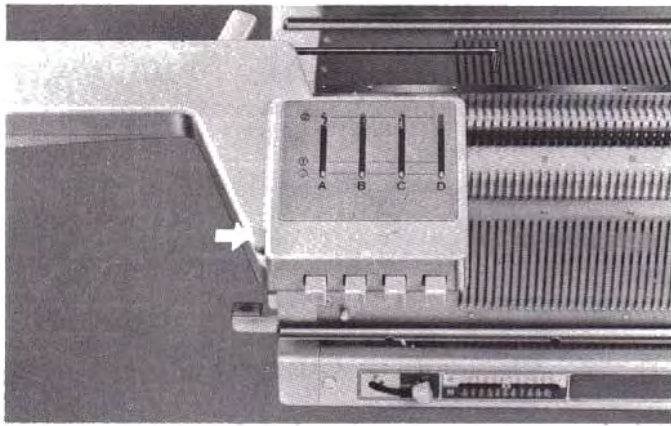


(2) Loosen the Securing Wheel of the YC in the direction shown in the photograph opposite, until it stops. (As the Securing Wheel is loosened, the Securing Plate moves forward.)

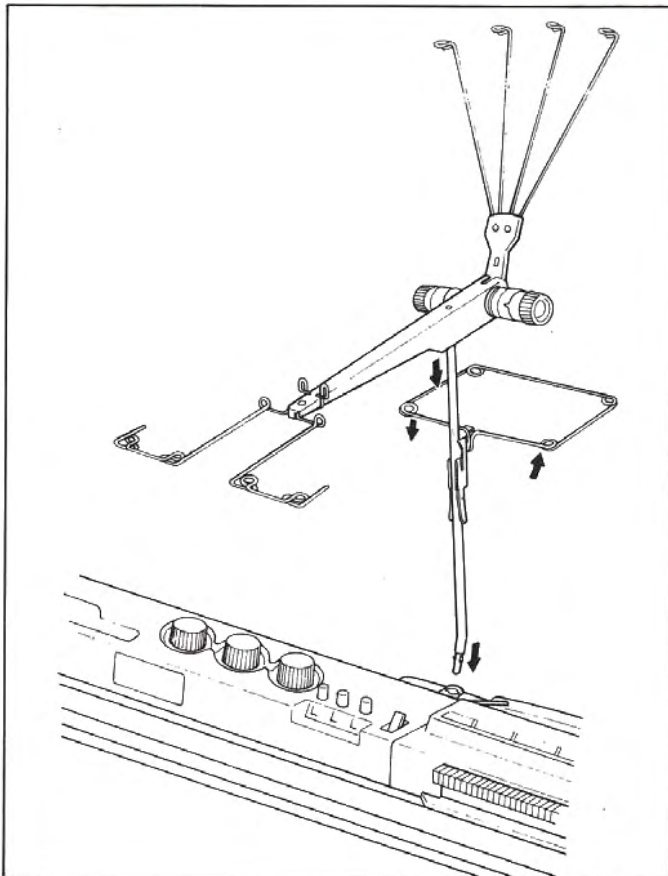




- (3) Insert the Securing Plate into the Guide Hole of the Needle Retainer and turn the Securing Wheel in the arrowed direction, as shown in the opposite diagram until the Securing Plate is firmly installed. Be sure that the edge of the YC is firmly set against the side cover of the casement. (While the YC is installed at the side of the Knitter, the right end of the Needle Retainer protrudes 2–3 cms.)

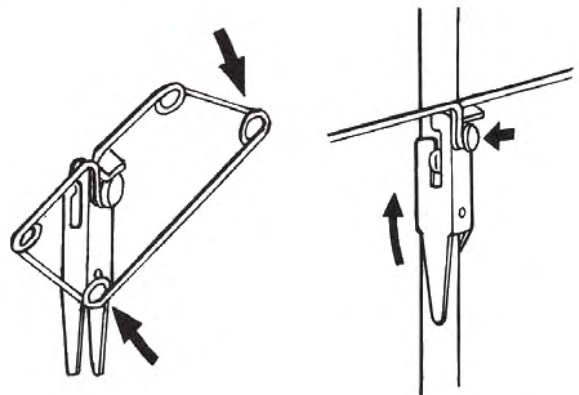


- (4) Push the Release Button so that four Holder Buttons are aligned at the ① position. (In this position the Holders do not operate if the Feeding Lever is activated.)



- (5) Install the Yarn Rod into the hole situated at the left of the Carrying Handle, with the Auto-Tension.

Turn the wire portion of the Tension Guide as shown in the arrowed direction, and depressing the extruded part in the arrowed direction, insert the Guide from the underneath.

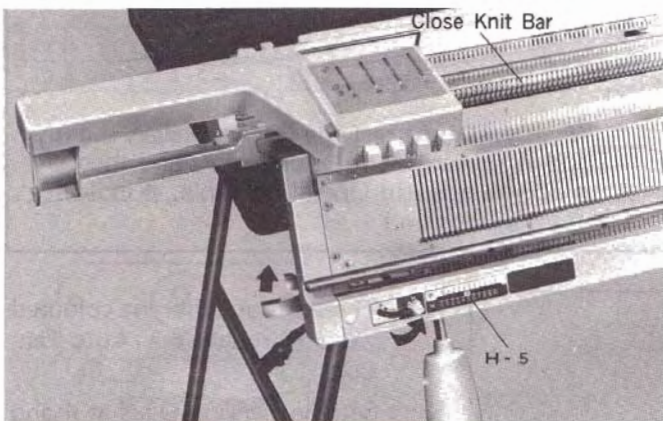


# 3. BASIC KNITTING



Holder A = Purple  
 Holder B = Yellow  
 Holder C = Red  
 Holder D = Black

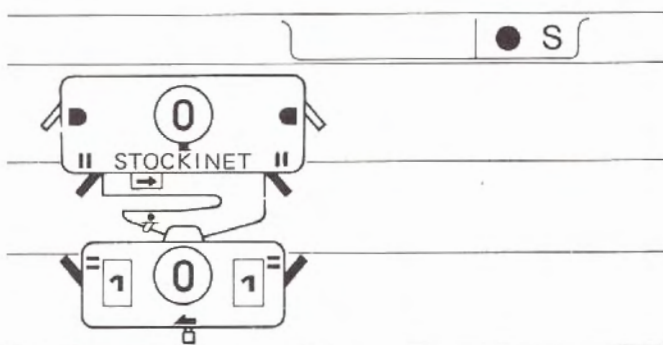
After the setting of the YC is completed, knitting can begin using four yarns (light weight) in a double rib striped pattern. (The following is an example of knitting in double rib using four different coloured yarns.)



- (1) Insert the Close Knit Bar between the Knitter Sinker Posts and the front edge of the Needle Bed. (Refer to "Close Knit Bar" in the Ribber Instruction Book.) Set the Pile Levers to the up position, the Half-Pitch Lever to H and the Swing Indicator to 5.

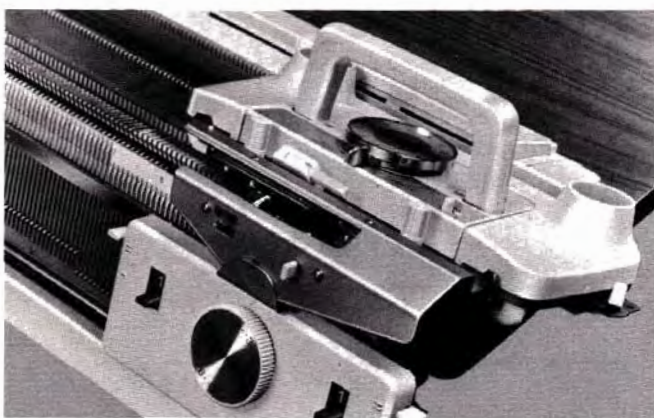


- (2) Using the Needle Pusher, push the same number of needles on both the Knitter and the Ribber to B position.

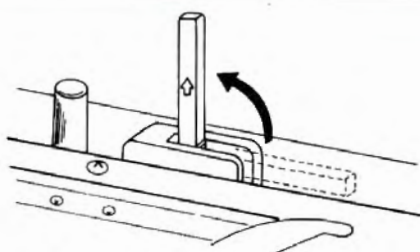


- (3) Set both Carriages as illustrated on the right and the L Knob to S. (Note: Disregard the above instruction concerning the L Knob if your Knitter does not have an L Knob installed.)

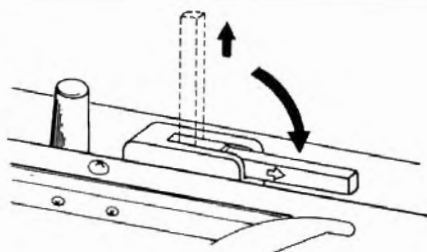




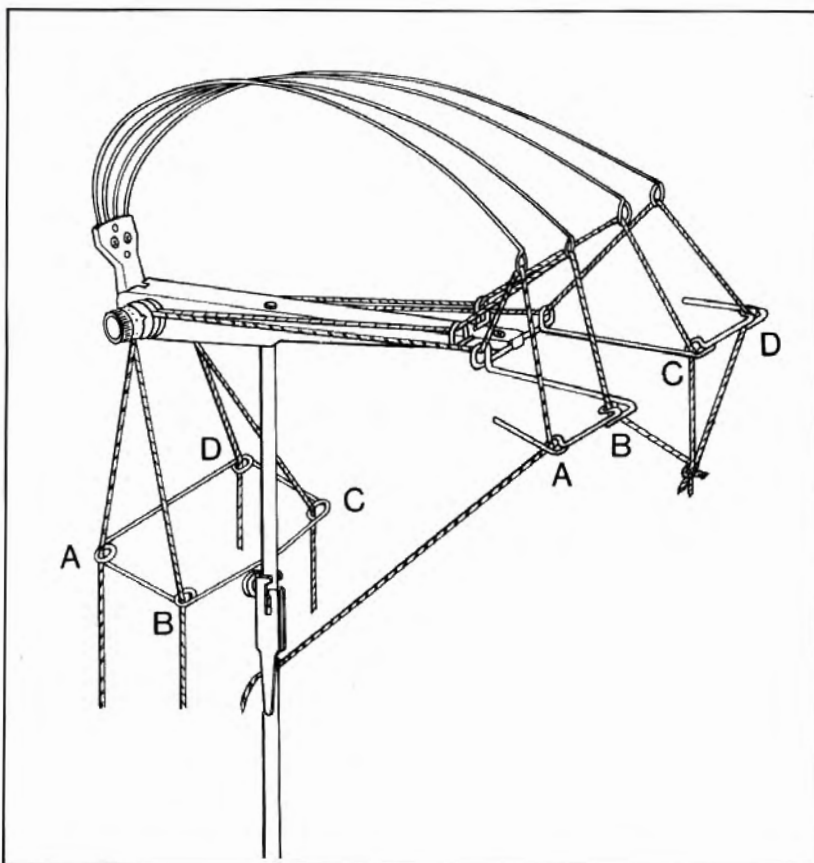
(4) With the Driving Lever on the Ribber Arm in an inactive position, align the needles in B position by moving the Carriage several times across the Needle Bed, ending with it on the right side.



\* When the Driving Lever should be in an active position, raise it with your finger. (In Operation Table, ↑ indicates active position.)



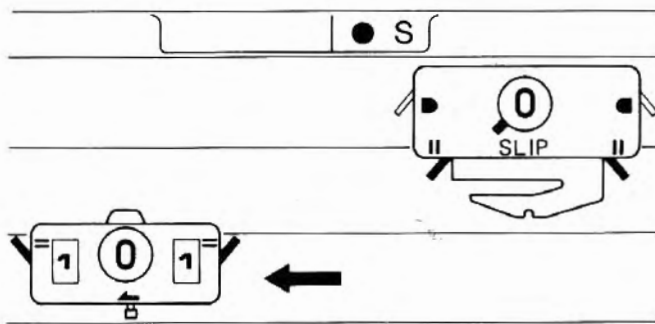
\* When you must rest the Driving Lever, slightly pull it upwards with your fingers and then lay it downwards. (In Operation Table, ⇩ indicates inactive position.)



(5) Thread four different coloured yarns through the Auto-Tension.

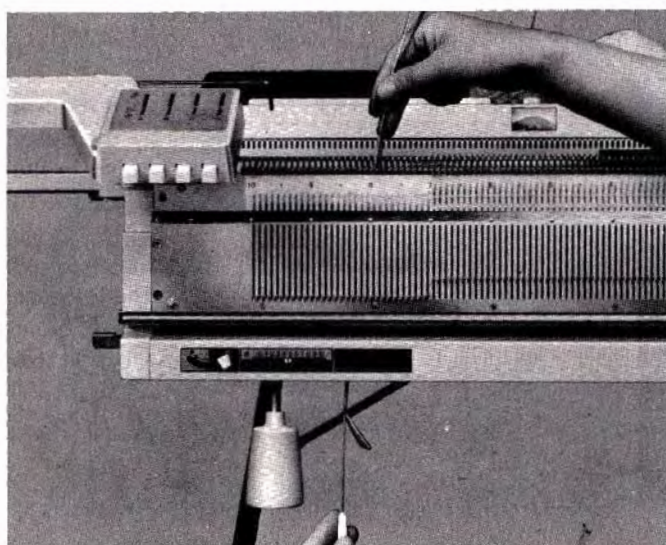
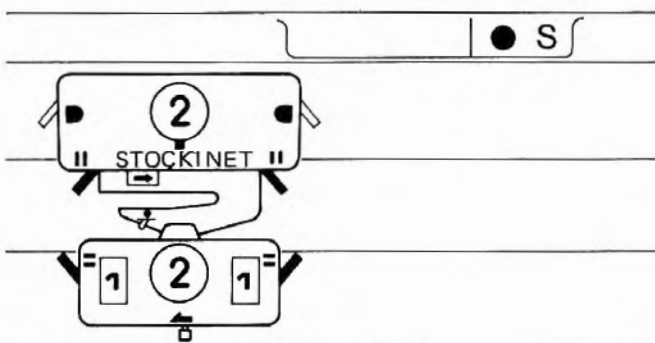
- \* Set the Tension Dials at 4 and thread the yarns as illustrated.
- \* The coloured yarns are lettered A, B, C, and D respectively from left to right.
- \* Colour A should be rested in the Yarn Clip and colours B, C and D should be tied together as illustrated on the left.





(The cast on when the Knitter side is used as right side.)

ORDER	KNITTER					RIBBER					DIRECTION
	CAM LEV.	SIDE LEV.	STITCH DIAL	STOP KNOB	CARD MEM.	SET LEV.	PICK KNOB	STITCH DIAL	SWING IND. H.P. LEV.		
CAST ON	1	STOCKI-NET	■ ■ ■	0	●		① ①	←	0	H 5	←
	2		○ ○ ○ ○ ○								
	3	SLIP	▲ ■	0	#		① ①	#	#	#	→



(6) Disconnect the Ribber Carriage from the Arm by pushing the Link Knob. Tilt the Ribber Carriage towards you and move it to the left side where the YC is installed. Set the Cam Lever of the Knitter to SLIP. Remove colour A yarn from the Yarn Clip and thread it through the Yarn Feeder.

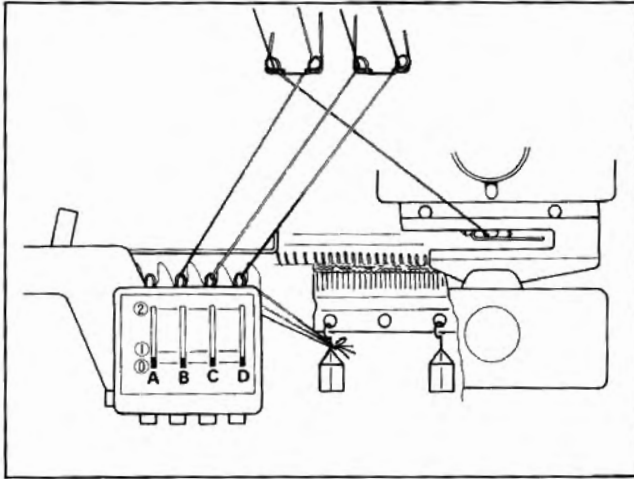
(7) Holding the yarn end from underneath of the machine, move the Knitter Carriage from right to left. (The yarn is not hooked on needles.)

(8) Connect the Ribber Carriage and set the Cam Lever of the Knitter Carriage to STOCKI-NET. Move the Carriage from left to right. Now the yarn is hooked on needles. Release the yarn end.

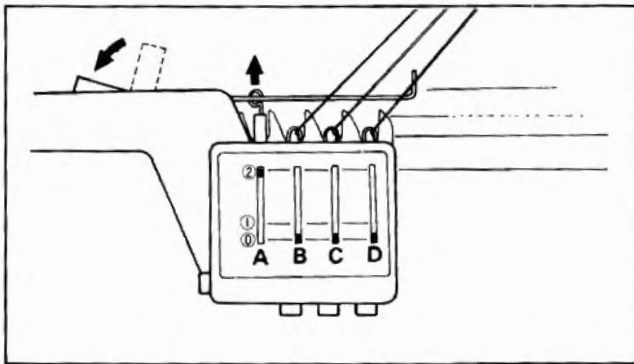
(9) Following the instructions of the Ribber Instruction Book, work the closed edge cast on for knitting when the Knitter side is used and leave the Carriage at the left side.

(10) Set the controls of the Carriage as in the diagram left and knit one row from left to right. Leave the Carriage at the right side and raise the Driving Lever.

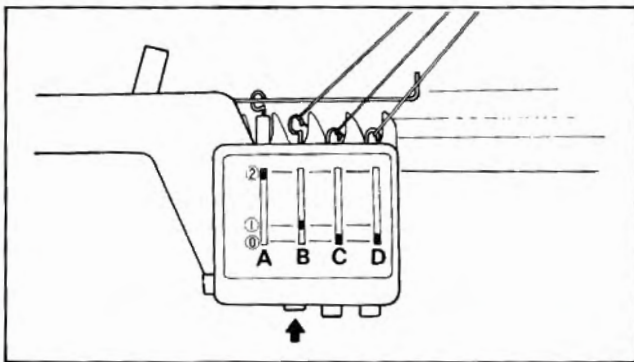
(11) Remove the three yarns tied together from the Yarn Clip and drop them between both Needle Beds. Insert the Hook Tool from the underneath and catch the yarns. Hook the yarns on the Weight suspended on the Cast on Comb.



(12) Hook colour B in Holder B, colour C in Holder C, and colour D in Holder D respectively.

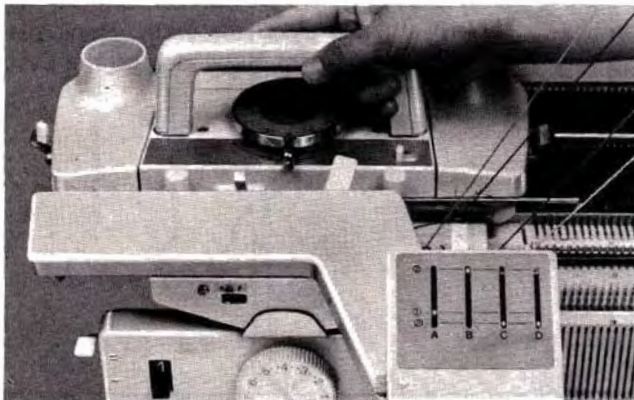


(13) Push the Holder Button A. The Holder is positioned in the ① position.



(14) Operate the Feeding Lever towards the left bringing the Holder A to the ② position.

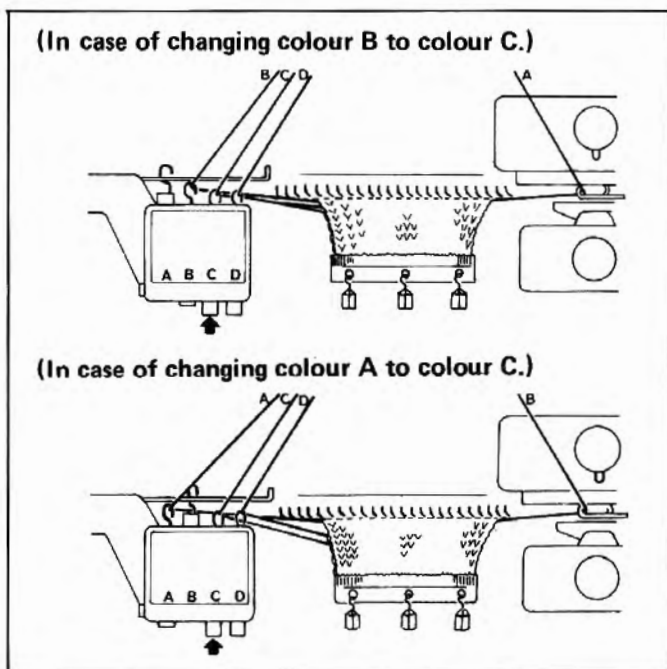
(15) Push the Holder Button B. The Holder B is positioned in the ① position.



(16) Move the Carriage from right to left until you hear a clicking sound made by the Feeding Lever, and see the yarns changing in the Holders A and B. Move the Carriage back to the right side.

Continue knitting in this way, the required number of rows and then move the Carriage to the right side of the Needle Beds. (Colour A and B are knitted alternately every two rows.)





(17) The following procedure is used when changing either of colour A or B to colour C.

\* In case of changing colour B to colour C. When colour A is threaded in the Yarn Feeder, leave the Carriage at the right side and push the Holder Button C.

\* In case of changing colour A to colour C. When colour B is threaded in the Yarn Feeder, leave the Carriage at the right side and push the Holder Button C.

(18) In the same manner as done in (16), knit required number of rows changing colour C to either of colour A or B. (Refer to "Tension adjustment by hand on page 10.)

\* The double rib striped pattern is knitted changing four colour yarns on four Holders as explained in the foregoing procedures.

## \* Changing yarns correctly \*

### 1. Range of the changing yarns.

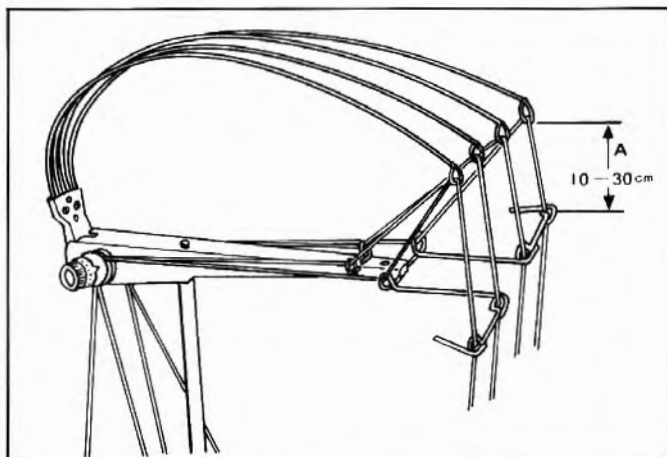
- \* When changing 2 colour yarns, use the Holder A and B. (The yarns will be changed automatically.)
- \* When changing 3 colour yarns, use the Holder A, B and C. (Automatic yarn change can be done within two yarns at an option.)
- \* When changing 4 colour yarns, use the Holder A, B, C, and D. (Automatic yarn change can be done within two yarns at an option.)

### 2. Range of yarns suitable.

- \* Medium yarn to cotton yarn.

Kind of yarns	Medium yarn	Light yarn	Thin yarn
Tension Dial	2 - 3	4 - 5	5 - 6

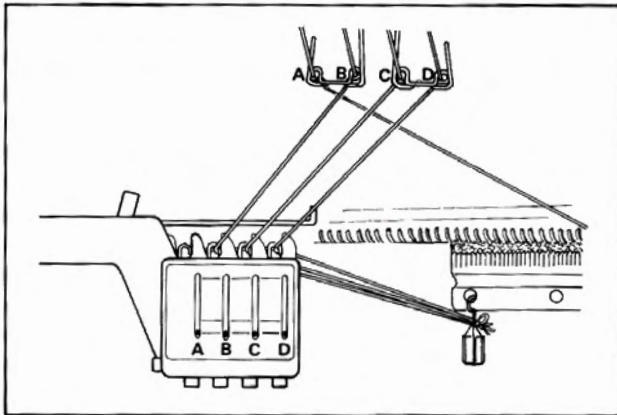
\* The Tension Dial should be adjusted according to thickness of yarn.



\* If different kinds of yarns are threaded through the Auto-Tension, adjust it by turning the Dial so that the A dimension is maintained at 10-30cms. for each yarn.

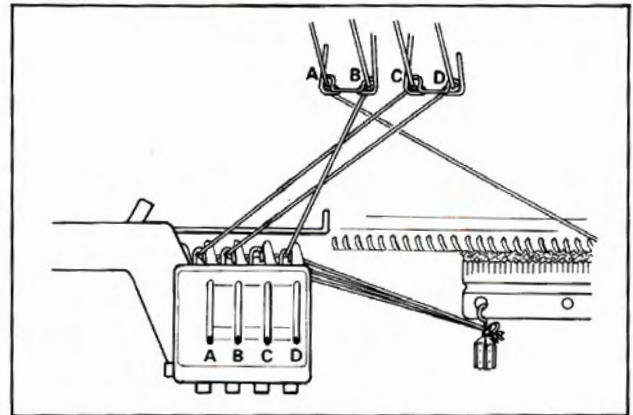
### 3. The relation between the Auto-Tension and the Holder.

\* Correct threading



Call the Holders A, B, C and D from left as well as the Tensions. (Thread yarns so that colour A is behind colours B, C, and D as shown in the diagram.)

\* Incorrect threading

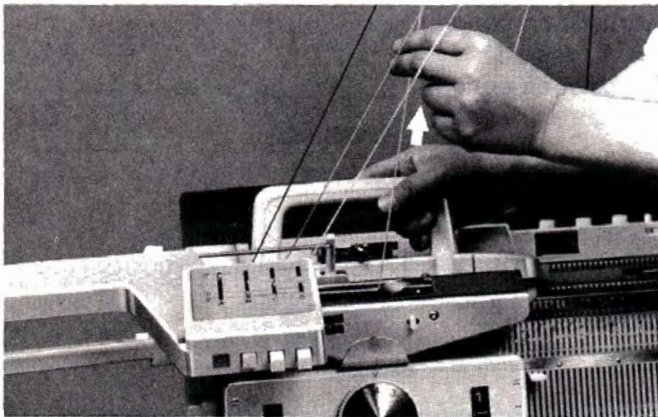


Crossed threading will cause slack on the yarn.

### 4. Tension adjustment by hand.

The Auto-Tension should be adjusted by hand additionally in the following situations.

- \* In case the first row is not well knitted even if the Holder Button was pushed to change yarns for three or four colours.
- \* In case any of the yarns is not guided smoothly into the Yarn Feeder owing to kind of yarns or to changing order.



- \* When the Carriage is at the left side, do as follows.
- \* After changing yarns and when returning the Carriage back, hold the knitting yarn to take up the slack.

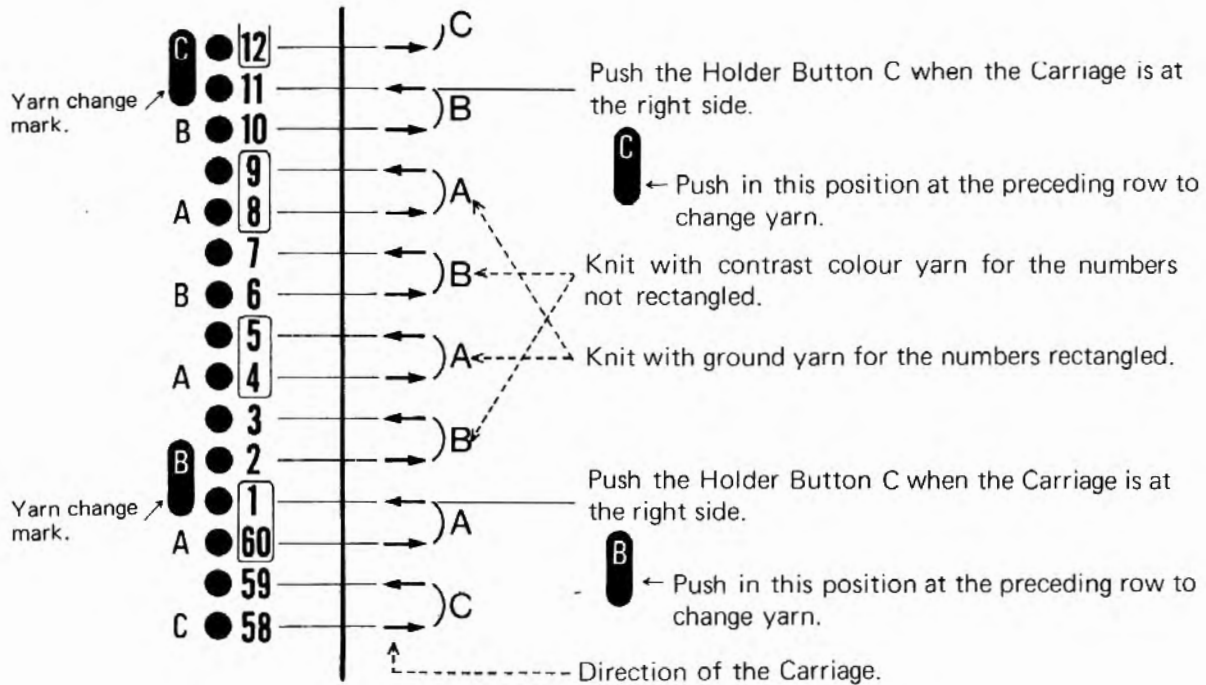


# 4. PATTERN KNITTING

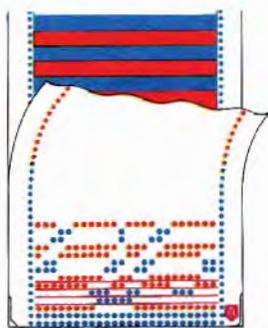
Knit double jacquard and point knitting in double jacquard using the YC.

## \* Read the markings for changing the yarns on the Punch Card.\*

\* The marking A, B, C, D printed inside the feeding holes indicates the position to change the yarns.



## \* Use Check Card\*



\* The Check Card is used to check the pattern on the Punch Card and to find any wrongly punched hole. To check the Punch Card lay the Punch Card on top of the Check Card, making sure that the sides and bottom edges fit exactly.

Orange coloured part .....main yarn  
 Blue coloured part.....contrast yarn

## \* Recommended Stitch Dial numbers for yarn thickness to be knitted in double jacquard\*

Carriage	Kinds of yarn	
	Thin yarn	Light yarn
Knitter	2 - 3	3 - 5
Ribber	2 - 3	3 - 5

\* The first row and closed edge cast on is worked in the same way as done for double rib.

\* Set the Stitch Dial number at the same numbers as for double jacquard including point knitting (motif).

## \* Cast on \*

(1) Set the Carriage settings as instructed below.

### Knitter

Russel Lever.....II (both)

L Knob.....S

Half Pitch Lever.....H

Swing Indicator.....5

Pile Lever.....Raised (Space between the Needle Beds is narrowed.)

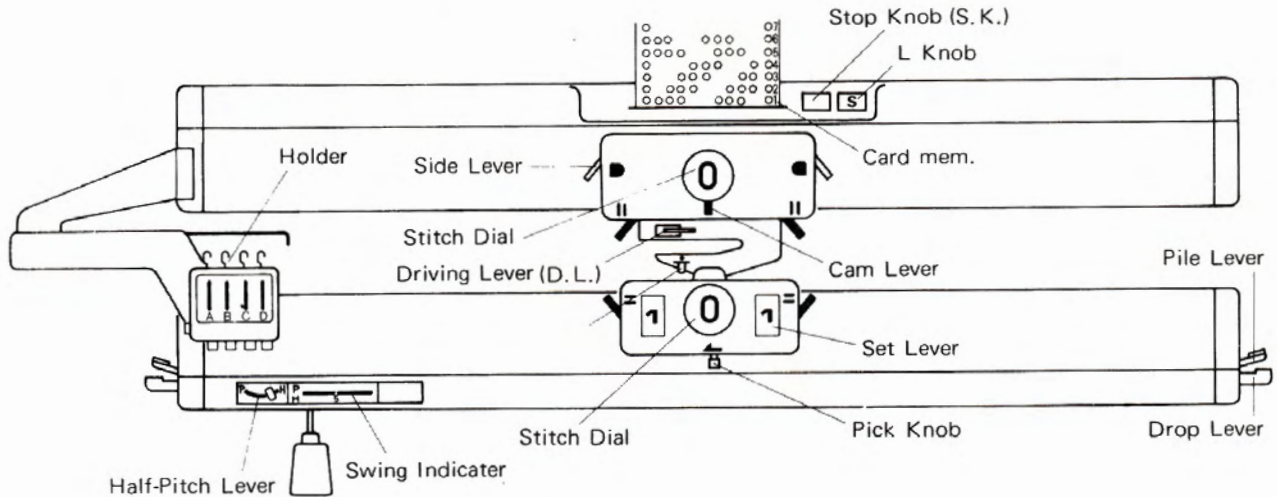
### Ribber

Pick Knob.....▲

Russel Lever.....= (both)

Auxiliary Yarn Feeder Lever.....●

Knit Bar.....in use



(2) Start knitting from the left side when the Knitter side is used as the right side.

ORDER	CARD MEM.	Y. C. (HOLDER)				KNITTER			RIBBER		DIRECTION	
		A	B	C	D	CAM LEV.	SIDE LEV.	S. K.	SET LEV.	D. L.		
① 1		①	①	①	①	STOCK1. NET	▲	▲	●	① ①	→	.....Start from the left side. .....Closed edge cast on. .....Insert the Punch Card and knit. .....(Refer to page 6-7.)
2												
3		"	"	"	"	SLIP	▲	▲	"	① ①	→	
4		"	"	"	"	STOCK1. NET	▲	▲	"	① ①	→	
5	Place contrast yarn into the Holder.											
② 1	①	②	①	"	"	SLIP	"	▼	"	↑	←	For changing yarn automatically, move the Carriage to the left end until a clicking sound is heard and move the Carriage back. At the yarn change mark, push the relative Holder Button and knit. (Refer to page 11.)
2	2	①	②	"	"	"	"	"	"	"	→	
3	3	"	"	"	"	"	"	"	"	"	←	
4	4	②	①	"	"	"	"	"	"	"	→	

Indicates the position of the Holders.

Example



... Colour C will be knitted starting from this row.

... Push the Holder Button C and Knit. (The Carriage is at the right side.)

Yarn change mark.

Note:\* Do not push the Holder Button when the yarn change mark is not appeared.



# 1 DOUBLE JACQUARD

CARD No.11 [R-2] -A Double jacquard (1)



Holder A = Dark brown 1 Pat. = 24 sts., 48 rows.  
Holder B = Red

ORDER	CARD MEM.	Y. C. (HOLDER)				KNITTER			RIBBER		DIRECTION
		A	B	C	D	CAM LEV.	SIDE LEV.	S. K.	SET LEV.	D. L.	
CAST ON	1	①	①	①	①	STOCKI-NET	■ ■ ●	●	① ①	→	→
	2										
	3	"	"	"	"	SLIP	▲ ▲	"	① ①	"	→
	4	①	"	"	"	STOCKI-NET	▲ ▲	"	① ①	"	→
	5										
MAIN KNITTING	1	①	②	①	"	SLIP	"	▼	"	↑	→
	2	2	①	②	"	"	"	"	"	"	→
	3	3	"	"	"	"	"	"	"	"	→
	4	4	②	①	"	"	"	"	"	"	→
	5	↓	↓	↓	"	"	"	"	"	"	→

\* The following patterns are knitted in the same manner.

This type of knitting is the same as knit-in (but without the floating of yarn on the back side of the fabric) using more than two yarns, each knitting two rows alternately. The Knitter side is knitted in a slip stitch using the Punch Card and the Ribber side is knitted in double rib.

- \* Use two different coloured light yarn.  
Recommended stitch Dial Numbers.  
Knitter 4  
Ribber 4

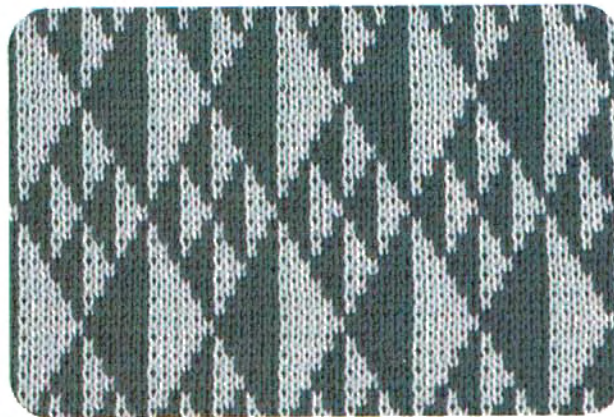
- (1) Thread colour A into the Yarn Feeder, and knit the first row and the closed edge cast on for double rib as in lines 1-3 in Order ①. (Start from the left side.)
- (2) Insert the Punch Card No.11 [R-2] in A direction into the Centre Panel.
- (3) Set the Carriage controls and the Stop Knob as in line 4 of Order ① and knit one row from left to right with colour A. (This one row of rib knitting memorizes the pattern in the Memory Bank.)
- (4) Place colour B into Holder B and tie the yarn end on a Ribber Weight.
- (5) According to line 1 of Order ②, set Holder A to the ② position and Holder B to ①. (Refer to pages 7-8) Also set the Carriage controls and the Stop Knob and knit one row. Move the Carriage up to the YC until the yarn changes to colour B.
- (6) From the second row, the YC changes colour A with colour B automatically when the Carriage comes to the left side.

CARD No.12 [R-2] -A Double jacquard (2)



Holder A = Dark brown 1 Pat. = 24 sts., 56 rows.  
Holder B = Orange

CARD No.13 [R-2] -A Double jacquard (3)



Holder A = Blue 1 Pat. = 12 sts., 48 rows.  
Holder B = White



\* On the Cards No.14–20, when the yarn change mark appears, push the respective Holder Button and knit.

**CARD No.14** (R-2)-A **Double jacquard (4)**



Holder **A** = White  
Holder **B** = Purple  
Holder **C** = Red  
1 Pat. = 24 sts., 60 rows.

**CARD No.15** (R-2)-A **Double jacquard (5)**



Holder **A** = Blue  
Holder **B** = Yellow  
Holder **C** = White  
1 Pat. = 24 sts., 60 rows.

**CARD No.16** (R-2)-A **Double jacquard (6)**



Holder **A** = Blue  
Holder **B** = Pink  
Holder **C** = Brown  
Holder **D** = Grey  
1 Pat. = 24 sts., 60 rows.

**CARD No.17** (R-2)-A **Double jacquard (7)**



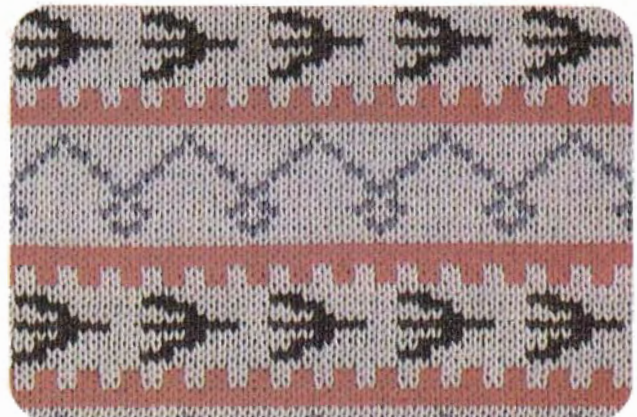
Holder **A** = Yellow  
Holder **B** = Red  
Holder **C** = Green  
Holder **D** = Black  
1 Pat. = 12 sts., 48 rows.

**CARD No.18** (R-2)-A **Double jacquard (8)**



Holder **A** = Blue  
Holder **B** = Yellow  
Holder **C** = White  
Holder **D** = Orange  
1 Pat. = 24 sts., 60 rows.

**CARD No.19** (R-2)-A **Double jacquard (9)**



Holder **A** = Pink  
Holder **B** = Red  
Holder **C** = Brown  
Holder **D** = Purple  
1 Pat. = 12 sts., 60 rows.



## 2 MAGIC POINT KNITTING IN DOUBLE JACQUARD

CARD No.20 (R-2)-A Magic point knitting



Holder A = Green  
 Holder B = White  
 Holder C = Red  
 Holder D = Light blue  
 1 Pat. = 24 sts., 60 rows.

ORDER	CARD MEM.	Y. C. (HOLDER)				KNITTER			RIBBER		DIRECTION
		A	B	C	D	CAM LEV.	SIDE LEV.	S. K.	SET LEV.	D. L.	
CAST ON	1	①	①	①	①	STOCKI-NET	■ ■ ●	●	① ①	→	—
	2		①								
	3		"	"	"	SLIP	▲ ■	"	① ①	"	≡≡≡
	4	①	"	"	"	STOCKI-NET	▲ ▲	"	① ①	"	—
	5										
②	1	①	②	①	"	SLIP	"	▼	"	↑	—
	1	1	1	1	1	"	"	"	"	"	≡≡≡

③	1	①	Ordinary double jacquard.
	18		Attach the Magic Cams.
	19	①	Set the Point Cams as shown in the diagram ① and knit.
	36		
	37	②	Set the Point Cams as shown in the diagram ② and knit.
	52		
53	③	Set the Point Cams as shown in the diagram ③ and knit.	
56			
57	→	Lay the Driving Lever. (→) Knit with the yarn in Holder D.	

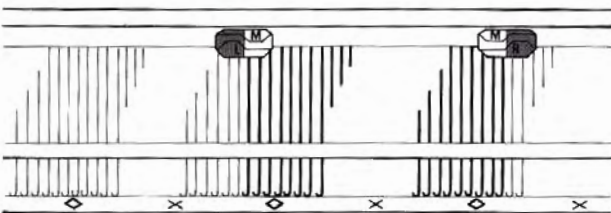


Diagram ②

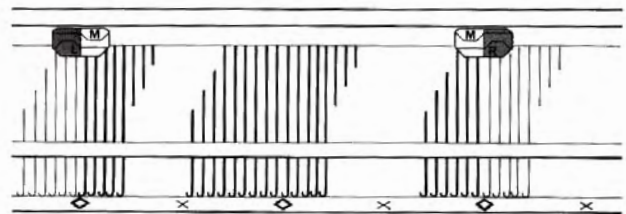


Diagram ①

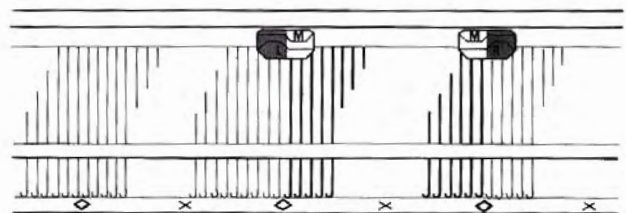


Diagram ③

- \* Prepare the following accessories.—  
 Magic Point Cam .....  
 1 pc. each right & left.  
 Point Cam.....  
 1 pc. each right & left.
- \* This sample uses four different coloured light weight yarns.  
 Recommended Stitch Dial Numbers.  
 Knitter 4  
 Ribber 4

- (1) Thread colour A into the Yarn Feeder and work the closed edge cast on for double rib.
- (2) Insert the Punch Card No.20 (R-2) in the A direction into the Centre Panel.
- (3) According to the line 4 of Order ①, set the Carriage controls and the Stop Knob, and knit one row with colour A leaving the Carriage at the right side.
- (4) Place the other yarns onto the Holders.
- (5) From rows 1-18 knit in double jacquard. Magic point knitting starts from the 19th row.

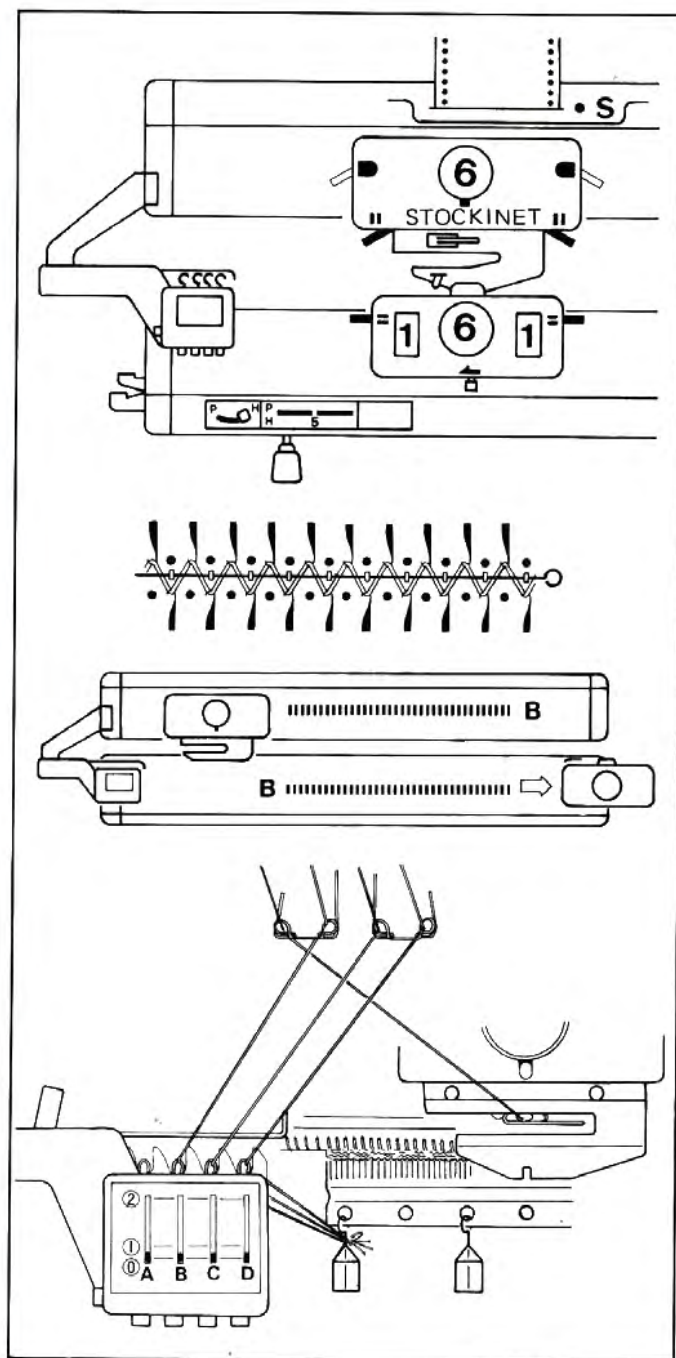
In case of magic point knitting, the needles to the out side of the Point Cam should be pushed to D position using the Needle Pusher at the row the Card memory is rectangled and knit.

- (6) Knit up to 56th row changing the position of the Point Cam according to the instructions in Order ③
- (7) From 57th row, lay the Driving Lever down and continue to knit with one coloured yarn using the Punch Card.

Note:\* Be sure to push the Holder Button at each of the yarn change mark and knit.

## KNITTING VARIATIONS ON THE KNITTER USING THE YC.

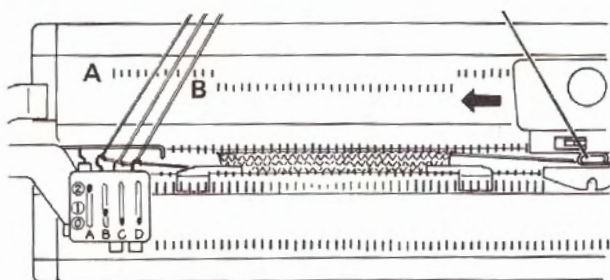
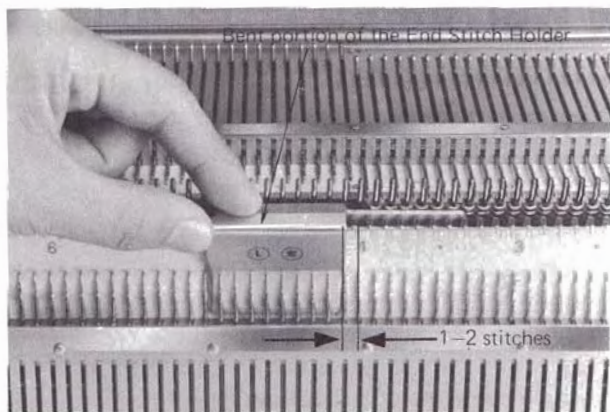
- \* In combined use with the YC, stockinet striped pattern, tuck stitch pattern in colours, or slip stitch pattern in colours, which previously required troublesome work, can now be knitted so easily on the Knitter.
- \* Those patterns can be made on the Knitter and the YC with supplemental use of the Ribber.
- \* When knitting on the Knitter using the YC, the following cast on procedure should be taken.



\* Use the YC Auto-Tension set.

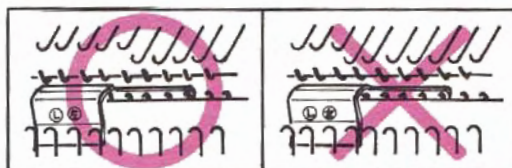
- (1) Set the controls of the machine as shown in the diagram left.  
Arrange the needles for double rib. Determine the Stitch Dial number according to the thickness of yarn. Select a Punch Card.
- (2) Thread waste yarn through the Yarn Feeder and knit one row from right to left. (The yarn will be hooked alternately on the two rows of needles in service in a zigzag pattern.)
- (3) Insert the Cast on Comb between the Knitter and the Ribber and suspend it with the Weights as shown in the diagram left. (In a manner reverse to that of drive lace.)
- (4) Disconnect the Ribber Carriage from the Arm and knit one row from left to right, removing stitches on the Ribber. Move the Ribber Carriage to the right end and remove it from the Needle Bed.
- (5) Push the Ribber needles to A position using the Needle Pusher.
- (6) Knit three rows in waste yarn using the Knitter Carriage. Change the waste yarn to the main yarn (colour A) and knit two rows leaving the Carriage at the right side.
- (7) Place the contrast yarns into the Holders of the YC and tie the ends onto a Weight Hook.





(8) Insert the End Stitch Holders under the Ribber needles as far as they go at both ends of fabric as shown in the left. By setting the Holders, both end stitches of fabric and the yarn are pressed against the Knitter Sinker Posts.

(Place the End Stitch Holder 1-2 needles off the end of fabric as illustrated below. If you place the bent portion of the Holder under the needles in B position, the Yarn Feeder and the needles may be damaged.)



(9) Set the Holder A at ②, the Holder B at ① and raise the Driving Lever. Knit one row from right to left reaching the YC.

\* The cast on has thus been completed. Continue to work main knitting.

## 1 STOCKINET STRIPED PATTERN

\* The sample is knitted using four colours yarn (medium).

ORDER	CARD MEM.	Y. C. (HOLDER)				KNITTER			RIBBER		DIRECTION
		A	B	C	D	CAM LEV.	SIDE LEV.	S.K.	SET LEV.	D.L.	
① 1		①	①	①	①	STOCKINET	▲ ▲ ●	① ①	→	←	
CAST ON	2	○○○○○○				~~~~~			②		
	3	*A*									
	4	"	"	"	"	"	"	"	"	≡ 3	
	5	*B*									
	6	"	"	"	"	"	"	"	"	≡ 2	
	7	*C*									
	8		②	①	"	"	"	"	"	↑	←
	MAIN KNITTING	② 1	①	②	"	"	"	"	"	"	←
2		①	"	①	"	"	"	"	"	←	
3		"	①	②	"	"	"	"	"	→	
4		"	①	"	①	"	"	"	"	→	
5		"	"	①	②	"	"	"	"	→	
6		①	"	①	"	"	"	"	"	←	
7		②	"	"	①	"	"	"	"	←	
8		"	①	"	①	"	"	"	"	←	
①	*D*										

\*A\* Move the Ribber Carriage from left to right removing the stitches on the Ribber. Remove the Ribber Carriage.

\*B\* Change the waste yarn in the Yarn Feeder to the main knitting yarn.

\*C\* Place the contrast coloured yarns onto the Holders and set the End Stitch Holders.

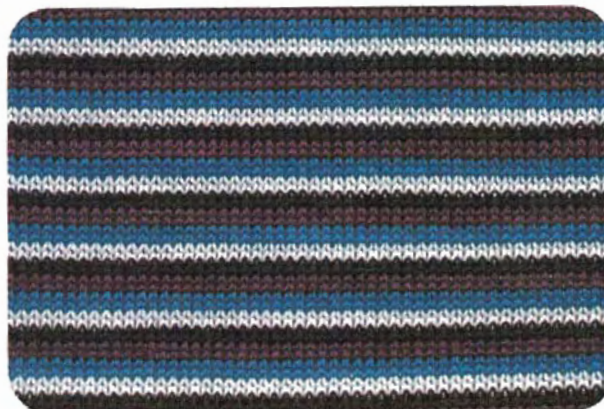
\*D\* Repeat the lines 1-8 and continue knitting.

Suggested Stitch Dial number (Common to both cast on and main knitting.)

Knitter 6

Ribber 6

- Thread a waste yarn through the Yarn Feeder and cast on according to Order ①
- Change the setting of the Holder as instructed in line 8 in Order ① and raise the Driving Lever.
- Knit changing the setting of the Holders as instructed in Order ②

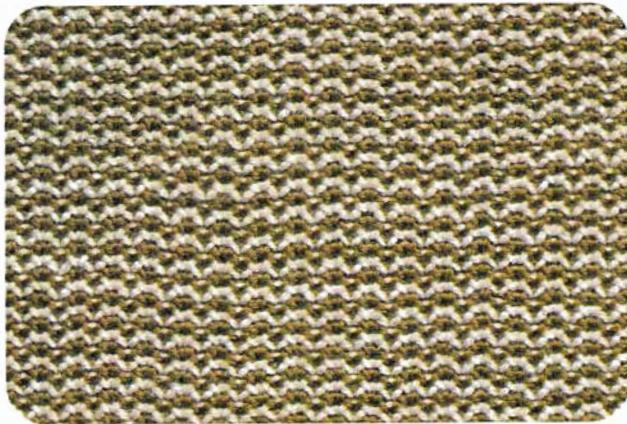


Holder A = Black  
Holder B = White  
Holder C = Blue  
Holder D = Purple



## 2 TUCK STITCH PATTERN IN COLOURS

CARD No.1-A



Holder **A** = White  
Holder **B** = Light brown

ORDER	CARD MEM.	Y. C. (HOLDER)				KNITTER			RIBBER		DIRECTION	
		A	B	C	D	CAM LEV.	SIDE LEV.	S.K.	SET LEV.	D.L.		
CAST ON	1	①	①	①	①	STOCKI-NET	■	■	●	① ①	→	—
	2	① ① ① ①		① ① ① ①		① ① ① ①		① ①		→		—
	3	*A*										
	4	"	"	"	"	"	"	"	"	"	"	③
	5	*B*										
	6	"	"	"	"	"	"	"	"	"	"	②
	7	*C*										
	8	②	①	"	"	"	"	"	"	"	↑	←
MAIN KNITTING	1	①	②	"	"	TUCK	▲	▲	▼	"	"	→
	2	"	"	"	"	"	"	"	"	"	"	→
	3	②	①	"	"	"	"	"	"	"	"	→
	4	"	"	"	"	"	"	"	"	"	"	→
	5	*D*										

\* The sample is knitted using medium weight yarn. Suggested Stich Dial number.  
(For both cast on and main knitting)

Knitter 6  
Ribber 6

- (1) Thread a waste yarn through the Yarn Feeder and cast on according to Order ①. The Punch Card is used.
- (2) Start main knitting according to Order ②.
- (3) When you wish to change from the main yarn to a contrast one, push the respective Holder Button at the preceding row to change yarn and continue knitting. The Holder Button should be pushed when the Carriage is at the right side.

\*A\* Move the Ribber Carriage from left to right removing the stitches on the Ribber. Remove the Ribber Carriage.

\*B\* Change the waste yarn in the Yarn Feeder to the main knitting yarn.

\*C\* Place the contrast coloured yarns onto the Holders and set the End Stitch Holders.

\*D\* When knitting with more than two coloured yarns, push the Holder Button at the preceding row to change yarn and continue knitting. (The Carriage is at the right side.)

CARD No.7-A



Holder **A** = White  
Holder **B** = Green  
Holder **C** = Red  
Holder **D** = Black

Knit changing three coloured yarns on the Holders B, C, and D by pushing the Holder Buttons every 8 rows.

CARD No.4-A



Holder **A** = White  
Holder **B** = Brown  
Holder **C** = Black  
Holder **D** = White

Knit changing three coloured yarns on the Holders B, C, and D by pushing the Holder Buttons every 4 rows.



### 3 SLIP STITCH PATTERN IN COLOURS

CARD No.10—A



Holder A = Yellow  
Holder B = Blue  
Holder C = Red  
Holder D = Green

Knit changing three coloured yarns on the Holders B, C, and D by pushing the Holder Buttons every 4 rows.

ORDER	CARD MEM.	Y. C. (HOLDER)				KNITTER			RIBBER		DIRECTION
		A	B	C	D	CAM LEV.	SIDE LEV.	S.K.	SET LEV.	D.L.	
CAST ON	1	①	①	①	①	STOCKI-NET	■ ■ ●	●	① ①	→	←
	2	[Diagram: Cast on sequence]									
	3	*A*									
	4	"	"	"	"	"	"	"	"	"	≡ 3
	5	*B*									
	6	"	"	"	"	"	"	"	"	"	≡ 2
	7	*C*									
	8	②	①	"	"	"	"	"	"	"	↑ ←
MAIN KNITTING	1	①	②	"	"	SLIP	▲ ▲	"	"	"	→
	2	"	"	"	"	"	"	"	"	"	←
	3	②	①	"	"	"	"	"	"	"	→
	4	"	"	"	"	"	"	"	"	"	←
	5	*D*									

\* The sample is knitted using medium wight yarn. Suggested Stitch Dial number.  
(For both cast on and main knitting.)

Knitter 6  
Ribber 6

- (1) Thread a waste yarn through the Yarn Feeder and cast on according to Order ①. The Punch Card is used.
- (2) Start main knitting according to Order ②.
- (3) When you wish to change from the main yarn to a contrast one, push the respective Holder Button at the preceding row to change yarn and continue knitting. The Holder Button should be pushed when the Carriage is at the right side.

\*A\* Move the Ribber Carriage from left to right removing the stitches on the Ribber. Remove the Ribber Carriage.

\*B\* Change the waste yarn in the Yarn Feeder to the main knitting yarn.

\*C\* Place the contrast coloured yarns onto the Holders and set the End Stitch Holder.

\*D\* When knitting with more than three coloured yarns, push the Holder Button at the preceding row to change yarn and continue knitting. (The Carriage is at the right side.)

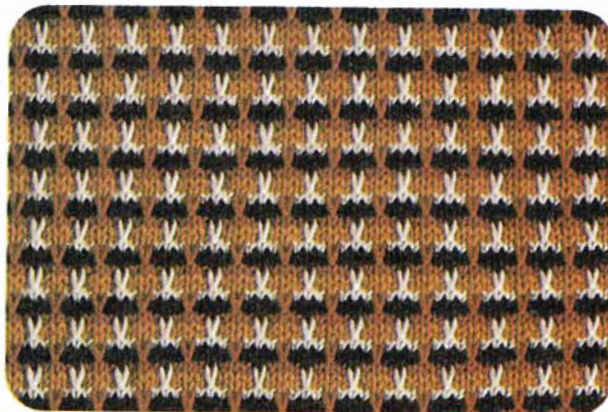
CARD No.12—A



Holder A = White  
Holder B = Black  
Holder C = Red  
Holder D = Blue

Knit changing three coloured yarns on the Holders B, C, and D by pushing the Holder Buttons every 12 rows.

CARD No.3—A



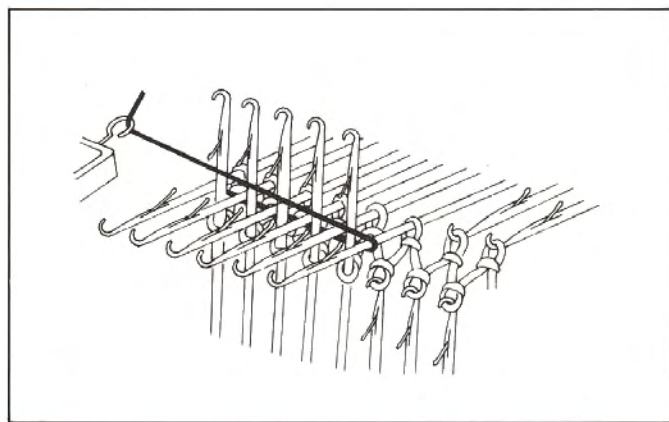
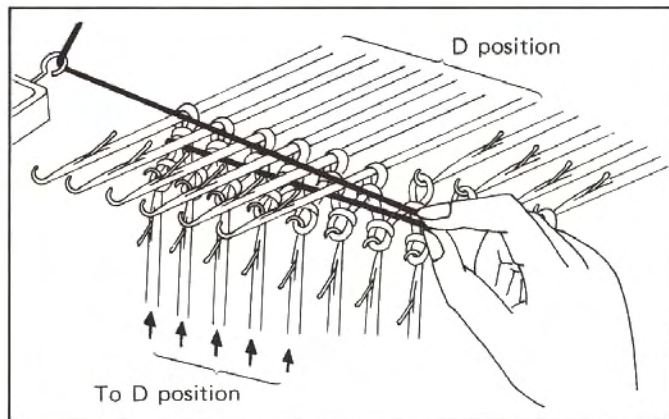
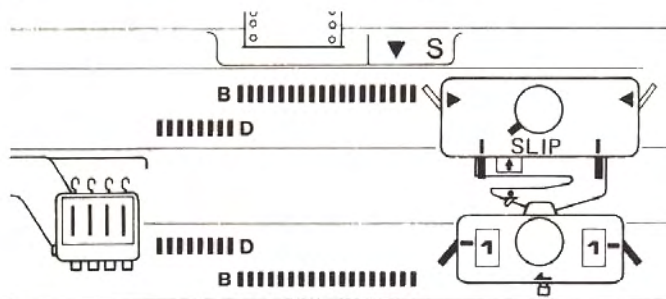
Holder A = White  
Holder B = Yellow  
Holder C = Brown  
Holder D = Black

Knit changing four coloured yarns on the Holders A, B, C and D by pushing the Holder Buttons every 2 rows.

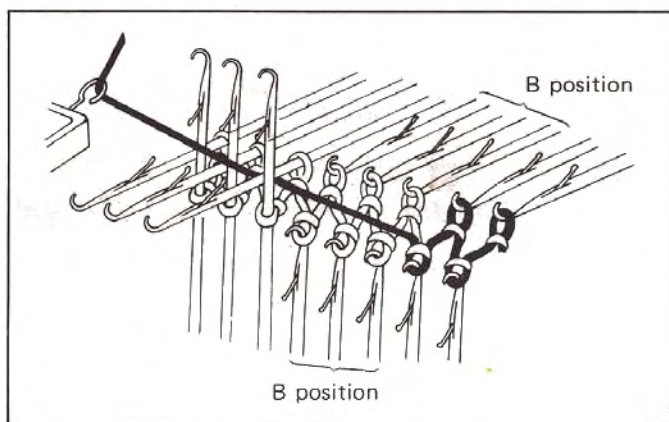


## \* Partial knitting while knitting double jacquard \*

(In case of decreasing stitches)



(In case of increasing stitches)



\* Partial knitting at the right side is worked in the same manner as for double rib.

\* Partial knitting at the left side (the YC side) is worked as follows.

Russel Lever

Knitter ..... I (both)

Ribber ..... - (both)

(1) Leave the Carriage at the right side. (At the side opposite the needles to be decreased.)

(2) When pushing needles to be rested to D position, lay yarn or yarns placed in the Holder between the Needle Beds by pulling it in opposite direction as illustrated. Push up the needles on both Beds so as the yarn is held.

(3) Knit one row from right to left changing the yarn and knit back.

\* Repeat procedures 1-3.

\* Set the Russel Levers as follows:

Knitter ..... I (both)

Ribber ..... - (both)

(1) Leave the Carriage at the right side, opposite the needles to be increased.

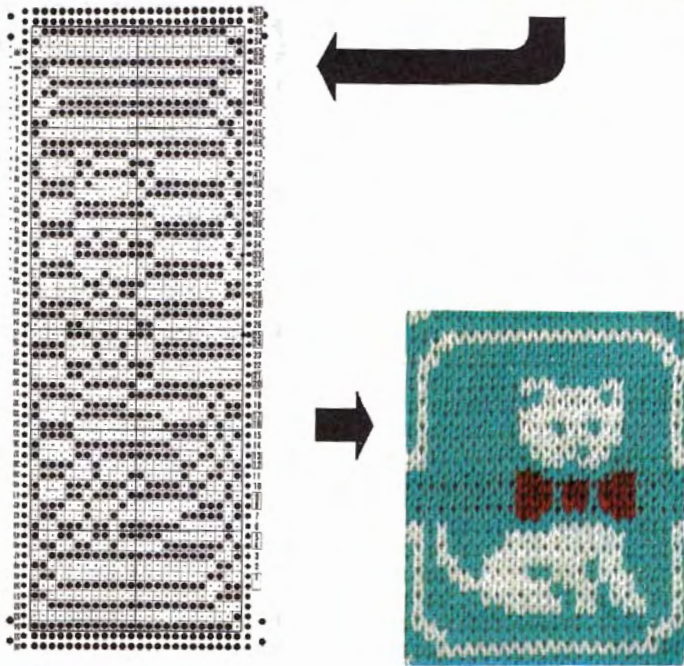
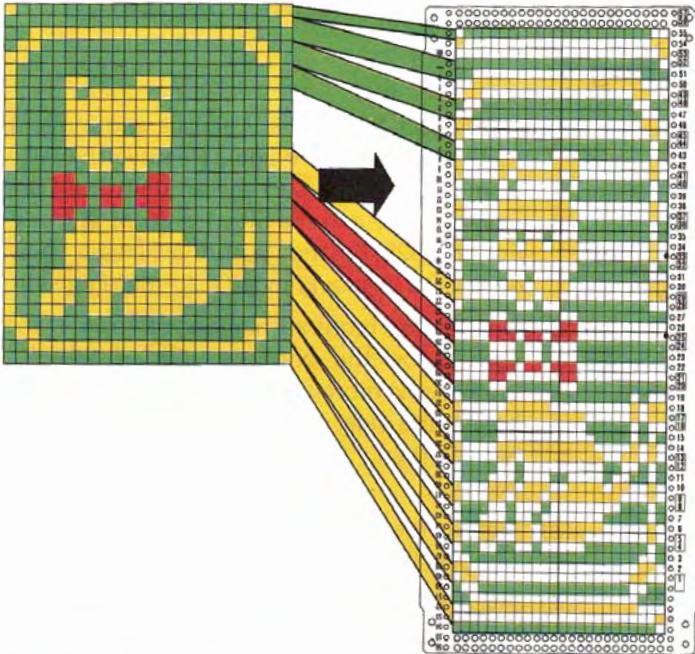
(2) Using the Transfer Tool, put the required number of stitches to be increased on the needles in D position onto their hooks. Align the needles in B position. At this moment, bring the yarn placed in the Holder under the needles in D position as illustrated.

(3) Knit one row from right to left changing yarn and knit back.

\* Repeat procedures (1)-(3).



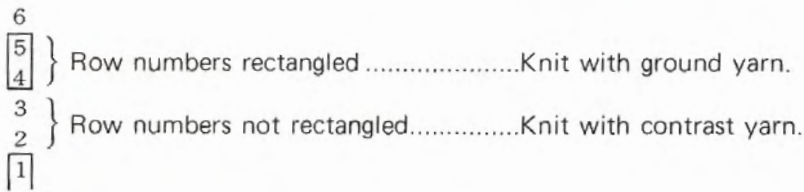
**\* Make a Punch Card for double jacquard \***



Make a Punch Card for double jacquard using the NP Card, an optional accessory.

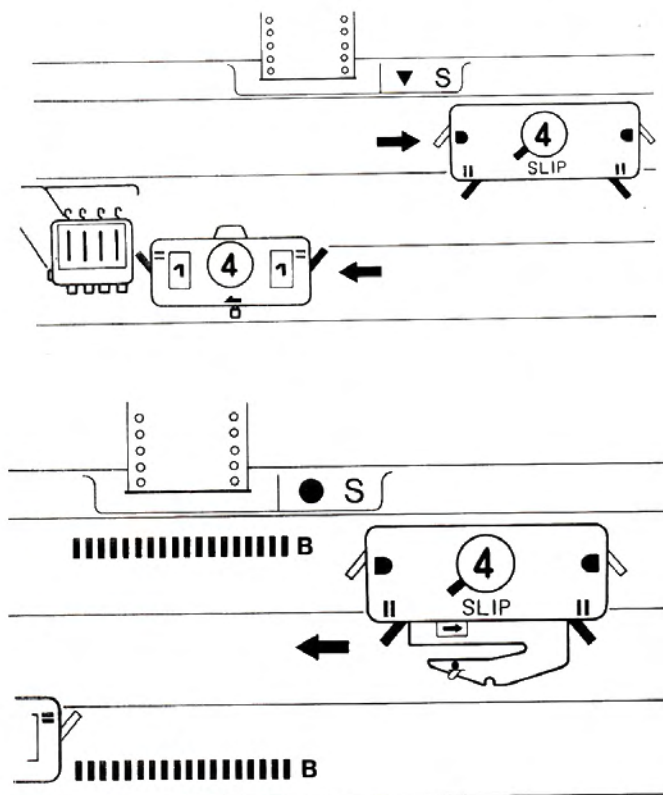
- (1) Draw a pattern on the **24 × 30** side of the Graph Paper accompanying the NP Card.
- (2) Place the NP Card in the direction of the row numbers, including the rectangular numbers, which are on the right side.
- (3) As in the diagram left, starting from the second row, mark the sections to be knitted in contrast yarn for two rows skipping two rows alternately. (Mark from the bottom to the top.)
- (4) Next, mark the sections to be knitted in ground yarn starting from the top, which were skipped in procedure (3).
- (5) After the marking has been completed, check to see if the number of stitches marked in units of two rows is 24. If not, correct the marking.
- (6) Mark the yarn change positions. (Mark on the preceding row to change yarn.)
- (7) Perforate all the sections marked. After the Card has been perforated, check if it is correctly perforated using the Check Card. (Refer to page 11.)

\* As a row on the Graph Paper is divided into two rows on the Punch Card, note that the perforated area of the first row (orange) is followed by an unperforated area on the line above (blue) or the unperforated area is followed by a perforated area on the line above. The relation between the third row and the fourth row is the same.



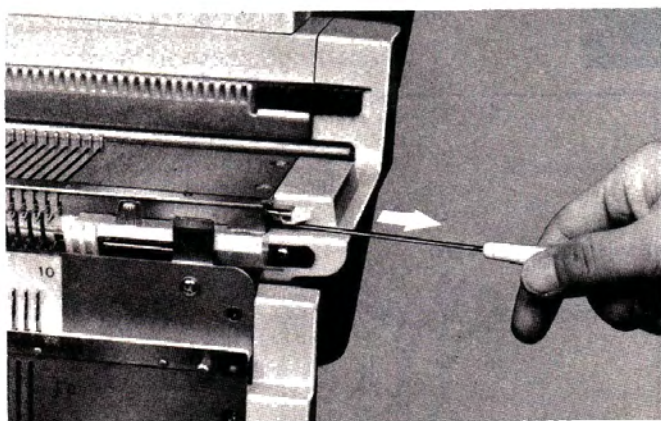
## 5. HELPFUL HINTS

### \* If a mistake is made while knitting \*



- (1) Disconnect the Ribber Carriage and move it to the YC side (left side). Remove the Arm from the Knitter Carriage and set the Cam Lever at SLIP and the Side Levers at  $\blacksquare$  mark. For the 328 Knitter, push the Release Lever of the Carriage and move it to the right side.
- (2) Unravel the required number of rows. If the yarn is on the opposite side of the YC, unravel one more row. The yarn must always be on the side of the YC after unravelling has finished. The needles should be in B position.
- (3) Return the Punch Card by the same number of rows that have been unravelled.
- (4) Place the yarns in the respective Holders as indicated in the operation table of that particular pattern.
- (5) Set the Arm to the Knitter Carriage and the Stop Knob at the  $\bullet$  mark and move the Carriage to the left side to memorize the pattern.
- (6) Set the Row Counter and the Stop Knob at the  $\blacktriangledown$  mark, the Driving Lever at  $\blacktriangle$ . With the Carriage at its original setting, continue to knit.

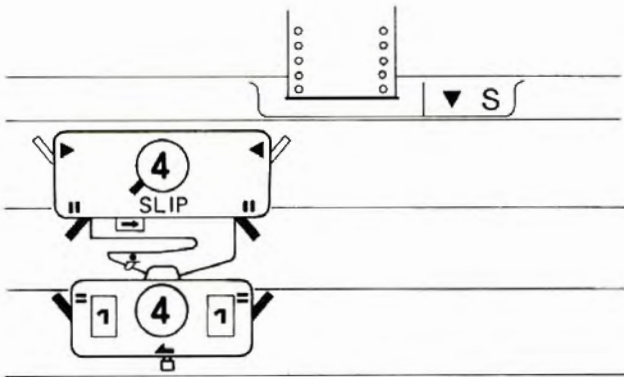
### \* If the YC can not be removed from the Knitter \*



- (1) Pull out the Needle Retainer, with the Hook Tool about 2–3 cms.
- (2) Unwind the Securing wheel until it stops and remove the YC from the Knitter.



**\* If you wish to knit double rib with the same effect as double jacquard \***



- \* If you knit double jacquard in combination with double rib, the fabric effect is different.
  - \* If you want to knit fabric without pattern in the same effect as double jacquard, work as follows:—
- (1) After the pattern in double jacquard has been completed, lay down the Driving Lever and continue knitting. (Leave the Carriage at the left side.)
  - (2) When knitting double jacquard again, set the Punch Card at the preceding row of Card memory (□) knit one row from left to right. Raise the Driving Lever and knit in the ordinary way.

**\* If the pattern is improperly knitted \***

- \* In order to knit Double Jacquard you must closely follow the Punch Card to realize where to change the yarn. If you fail to change the yarns, at the indicated marks on the Punch Card, the pattern will not be formed and a stripe pattern is knitted.
- \* Turn the Punch Card so as the Card memory number (□) appears above the ▼ mark on the Centre Panel, and move the Carriage across the Needle Bed to memorize the pattern. DO NOT fail to knit the first row from right to left. Follow the Punch Card carefully so as to knit a complete double jacquard pattern.

**\* When using the 4-Colour Auto-Tension for knitting other than double jacquard \***

- \* As the 4-Colour Auto-Tension is designed to take slack on yarn more strongly than the Auto-Tension (2 colour) accompanying the Knitter, if you knit with the Auto-Tension at the recommended Tension Dial number, the knitting will result in a tighter stitch formation. Therefore, in this case the following adjustment is necessary.  
 Tension Dial number ..... as instructed in the Ribber Instruction Book.  
 Stitch Dial number..... set at 1/3–2/3 larger number.

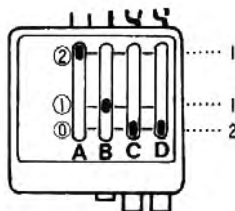
**Stitch Dial**

Type of knitting	Using the Knitter Auto-Tension	Using the 4-Colour Auto-Tension
Stockinet (Medium yarn)		
K1, P1. rib (Medium yarn)		

## \* If the Holder Buttons are erroneously operated \*

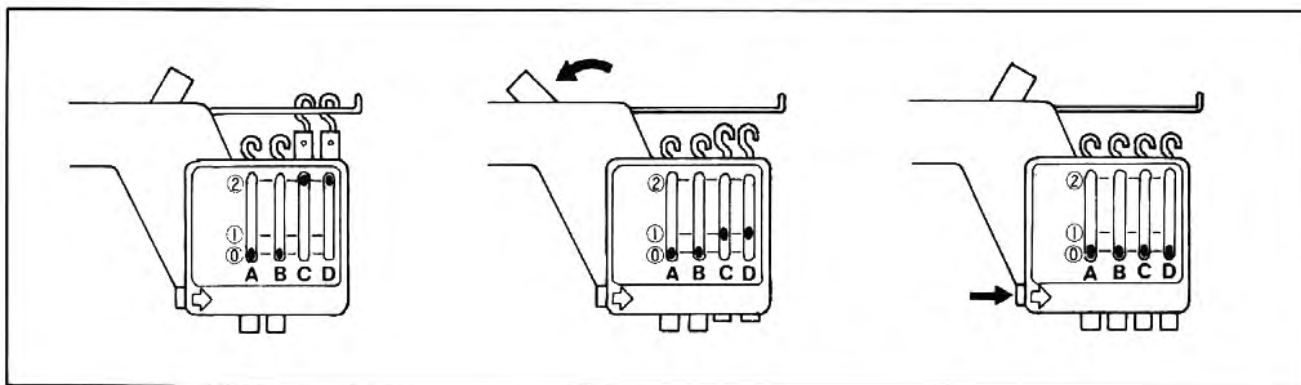
While knitting, the Holders of the YC should be positioned as follows.

- ② ..... 1 Holder.
- ① ..... 1 Holder.
- ① ..... 2 Holders.

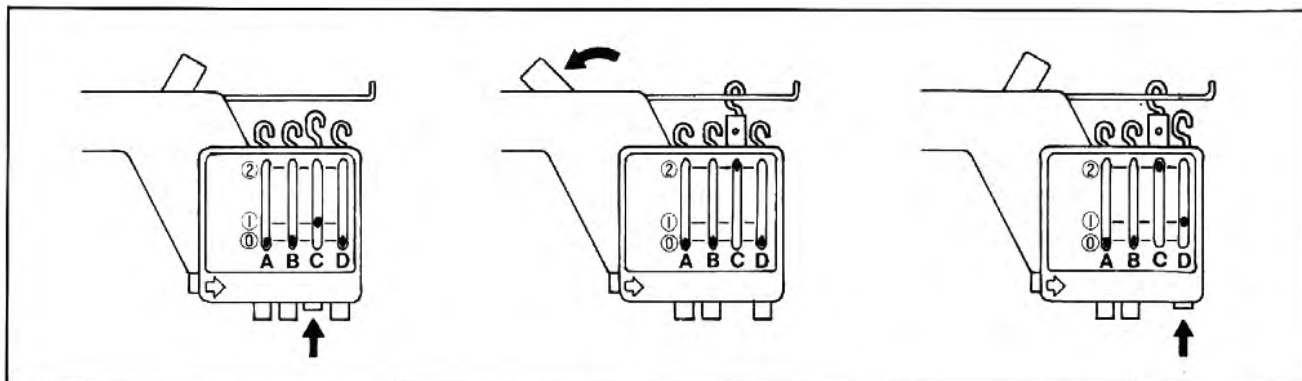


### (If more than two Holders are at the ②.)

- (1) Push the Feeding Lever to the left and bring the Holders in the ② to the ①.  
By pushing the Release Button, all the Holders will be aligned at the ① position.



- (2) Push the Holder Button which should be related to the yarn in the Yarn Feeder and set it at the ①.  
By pushing the Feeding Lever to the left, bring the Holder from the ① to the ②.  
Push the Holder Button for the yarn to be changed.



- (3) Place yarns correctly.

### (If more than two Holders are at the ①.)

Push the Release Button and align all the Holders at the ①. Perform procedures (2)–(3).

## \* Store the YC \*

When storing the YC, return the Holders to the ① position.