

brother®



**INSTRUCTION BOOK for
PATTERN PROGRAMMING DEVICE
PPD-100**

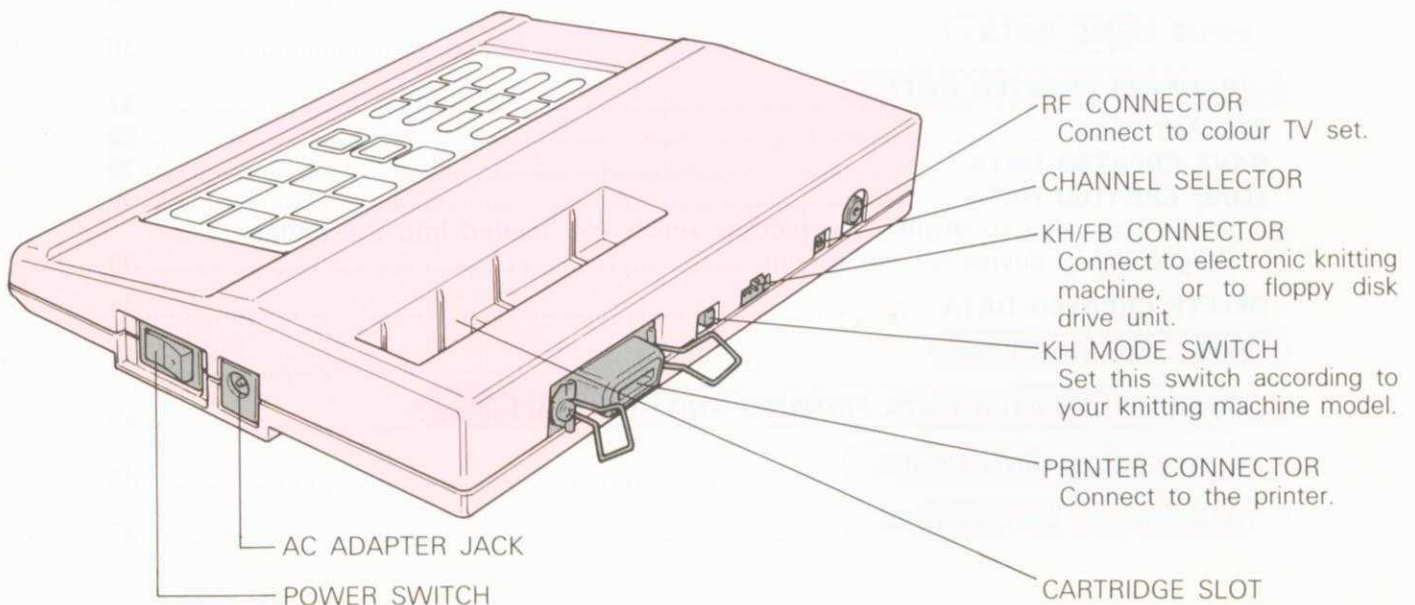
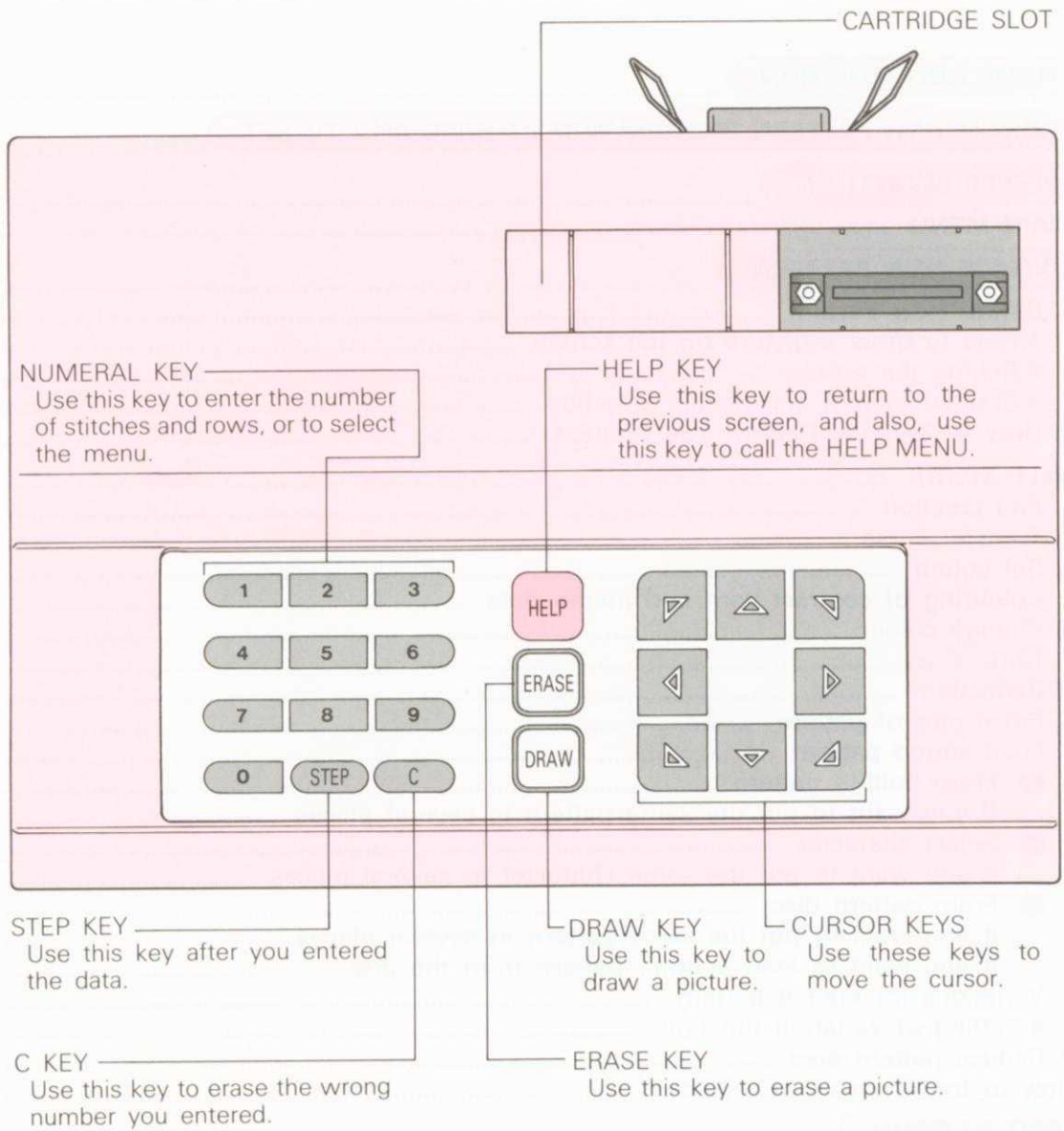


CONTENTS

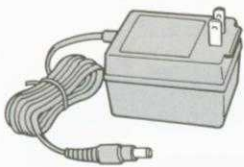
NAME AND FUNCTION	1
CONNECTING PATTERN PROGRAMMING DEVICE AND TV SET	3
POWER SWITCH ON	5
MAIN MENU	6
CREATE NEW PATTERN	7
1. Create New Pattern	7
• How to draw a picture on the screen	9
• Rolling the screen	10
• Created pattern and needle selection	10
2. How to Knit the Pattern You Created	10
HELP MENU	11
1. End creation	12
2. Transfer cursor	12
3. Set colour	13
Colouring of contrast yarn and memo data	16
4. Change colour	17
Note	18
5. Reduction	19
6. Erase part of pattern	20
7. Load stored pattern	21
① From built-in pattern	21
If you want to put the same pattern in several places	23
② Select character	24
If you want to put the same character in several places	26
③ From pattern disc	27
If you want to put the same pattern in several places	29
If you want to load another pattern from the disc	29
8. Variations for loaded pattern	30
• Setting of variation function	31
9. Reduce pattern area	32
How to frame a part of a pattern	33
EDIT PATTERN	34
DELETE PATTERN	35
When you want to delete all of the pattern that you created	35
INPUT MEMO DATA	36
TRANSFER CREATED DATA	37
FORMAT DISK	38
SAVE CREATED DATA	39
LOAD CREATED DATA	40
When you want to display the pattern which you loaded into the pattern programming device on the screen	40
DELETE CREATED DATA	41
PRINT OUT PATTERN	42
TRANSFER CREATED DATA FROM/TO KNITTING MACHINE	45
IN THE FOLLOWING CASES	46
DIAGRAM OF CHARACTERS	48

NAME AND FUNCTION

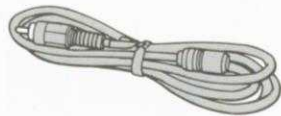
• PATTERN PROGRAMMING DEVICE



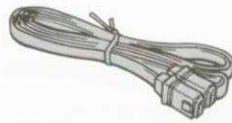
• ACCESSORIES



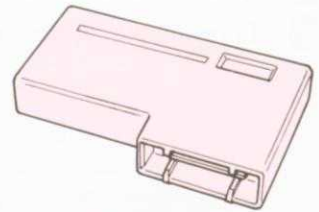
AC ADAPTER



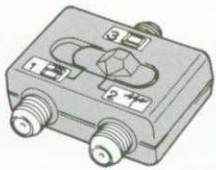
CABLE 1
Connect the pattern programming device and TV set.



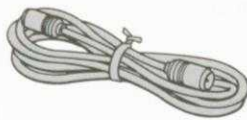
INTERFACE CABLE
Connect the pattern programming device and knitting machine or floppy disk drive unit.



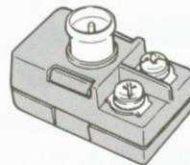
PROGRAM CARTRIDGE



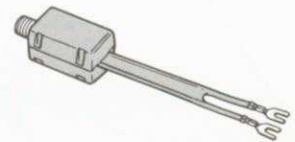
RF SWITCH (USA)



CABLE 2 (USA)
Connect the TV set and RF switch.

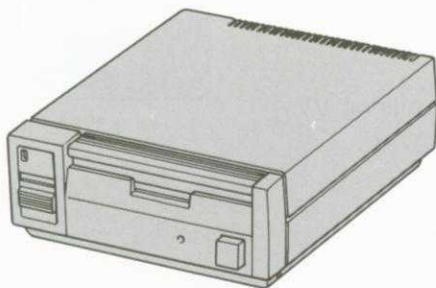


CONVERTER 1 (USA)

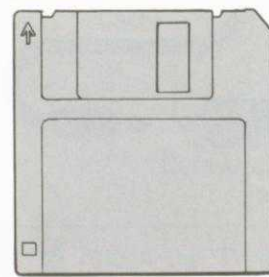


CONVERTER 2 (USA)

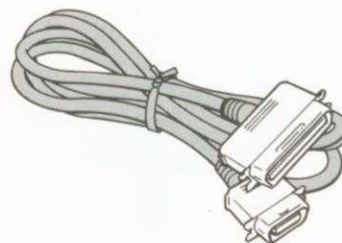
OPTION



FLOPPY DISK DRIVE UNIT



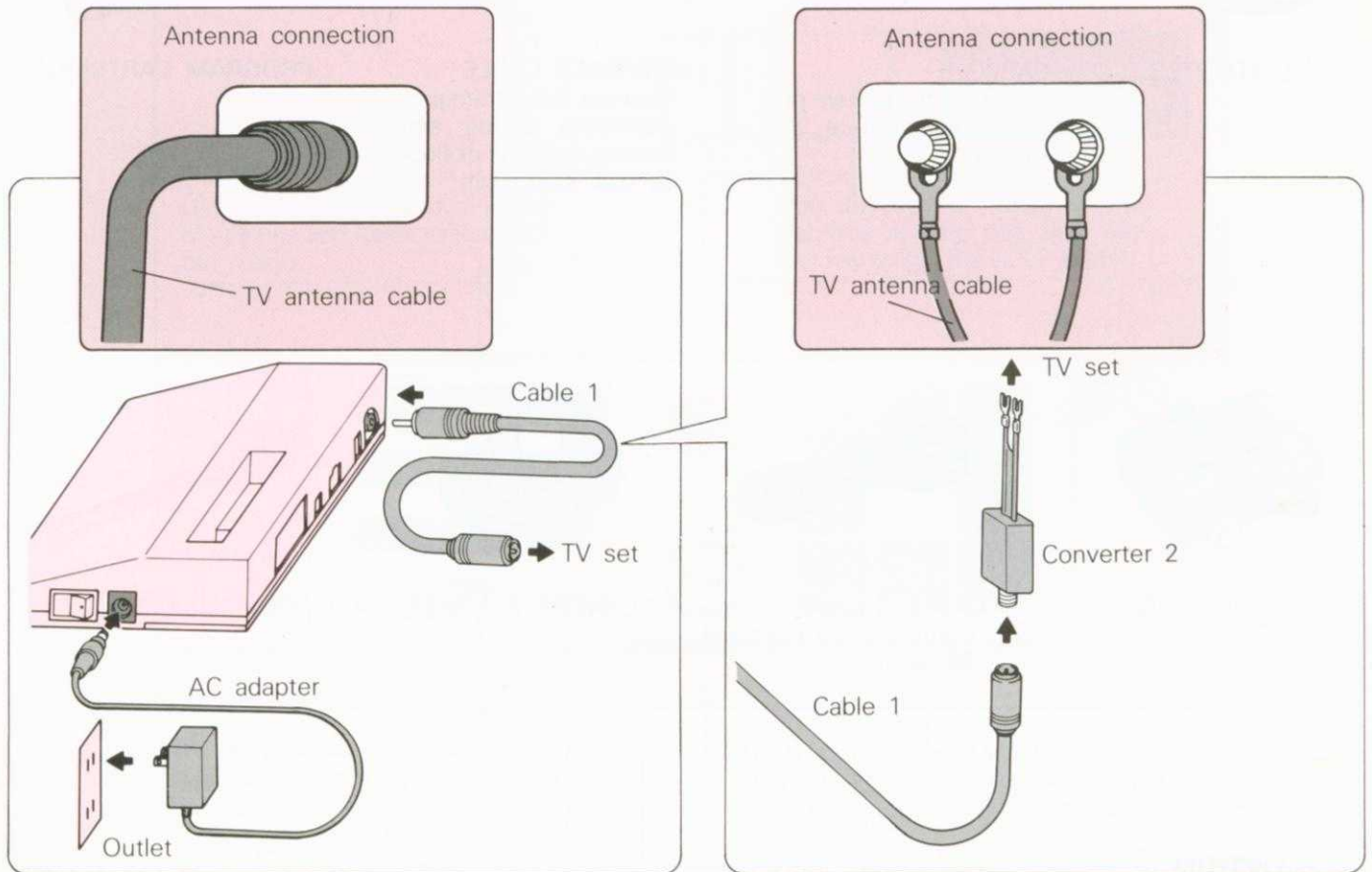
3.5 INCH FLOPPY DISK



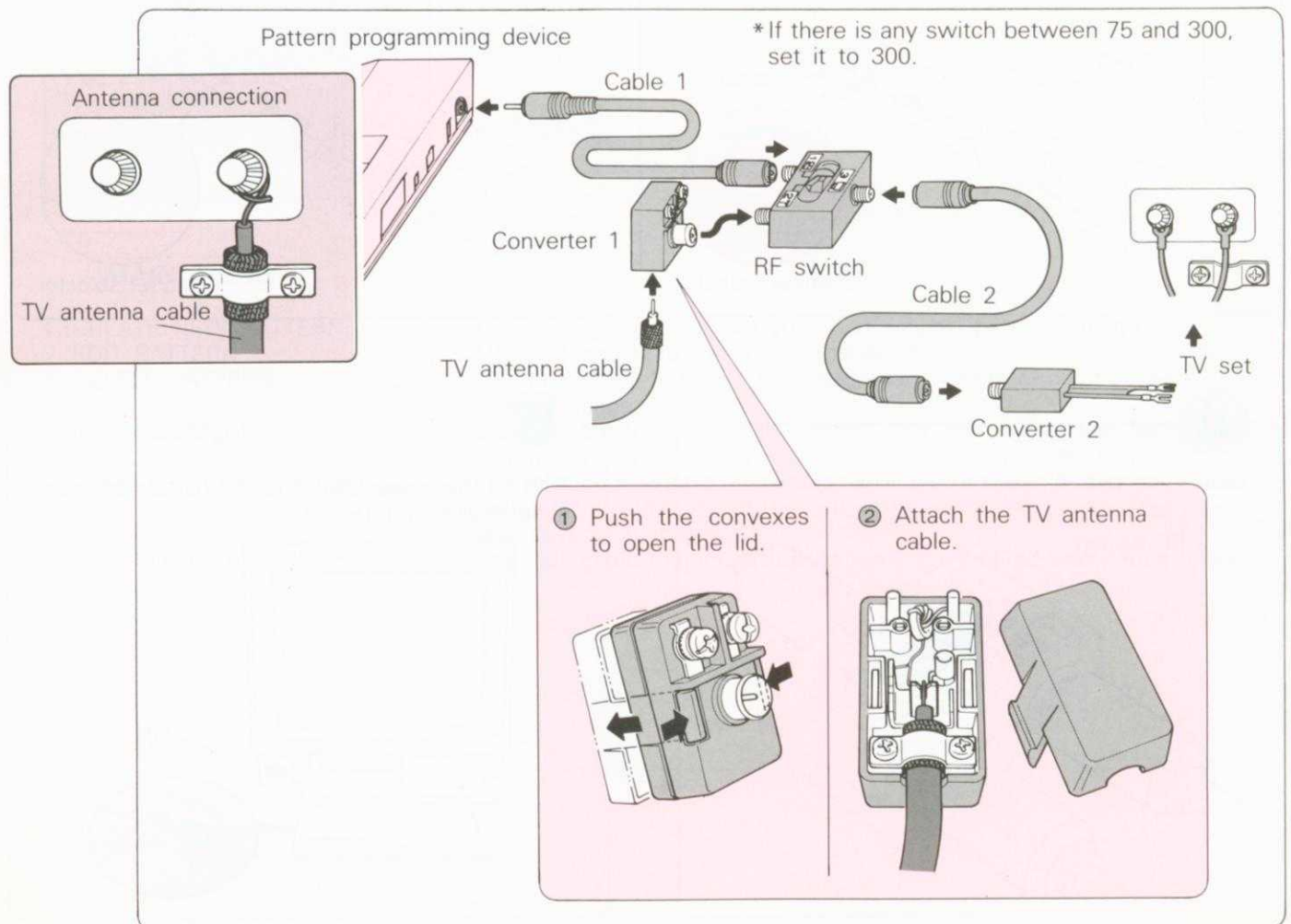
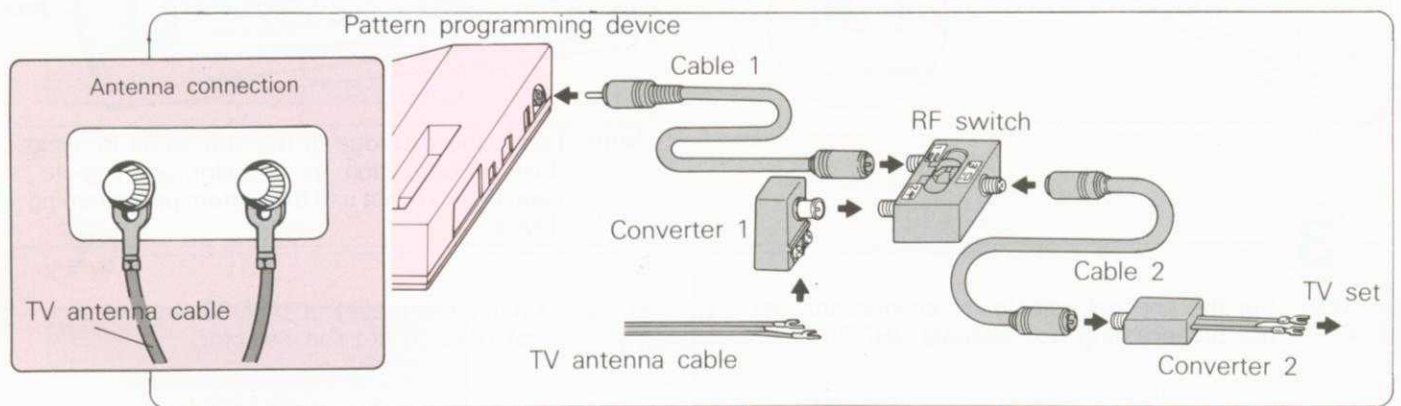
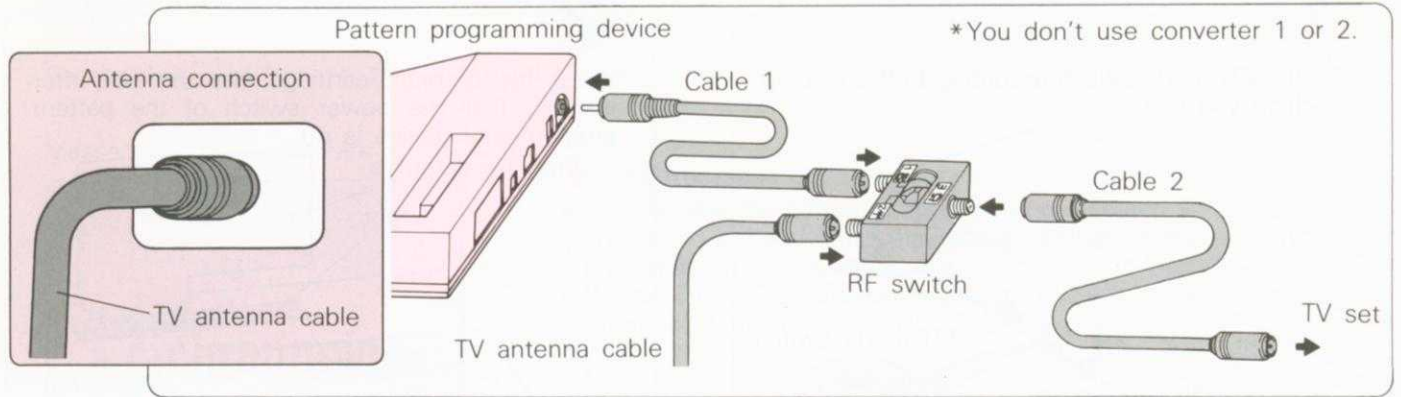
PRINTER CABLE

CONNECTING PATTERN PROGRAMMING DEVICE AND TV SET

- ① Insure that power switch of the pattern programming device and TV set is turned off.
- ② Unplug the antenna cable of TV set.
- ③ Connect the pattern programming device and TV set according to your TV antenna cable as follows.



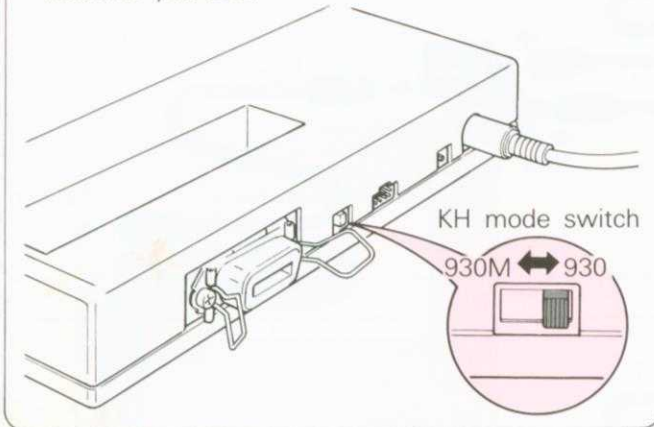
• CONNECTING THE PATTERN PROGRAMMING DEVICE AND TV SET USING RF SWITCH



POWER SWITCH ON

1

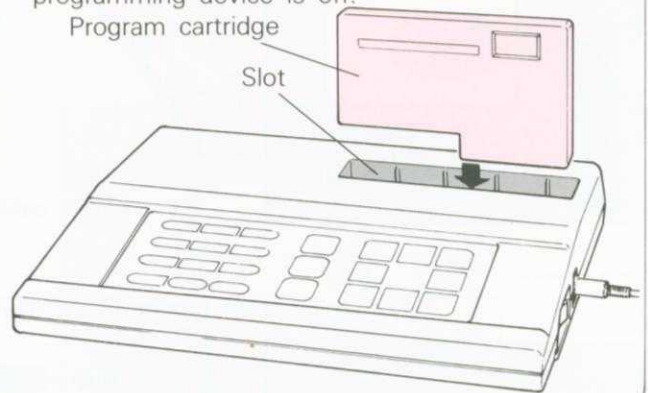
Set the KH mode switch according to the knitting machine you use.



2

Insert the program cartridge into the slot after insuring that the power switch of the pattern programming device is off.

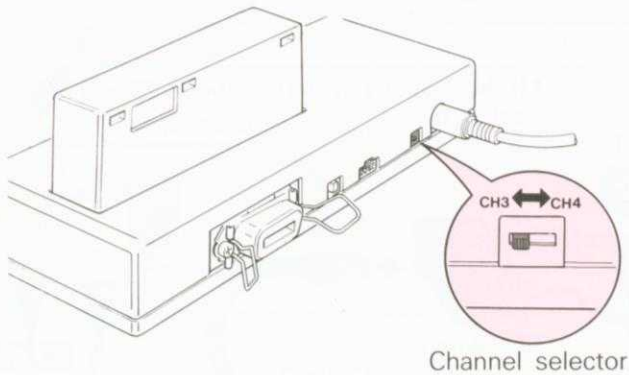
Program cartridge



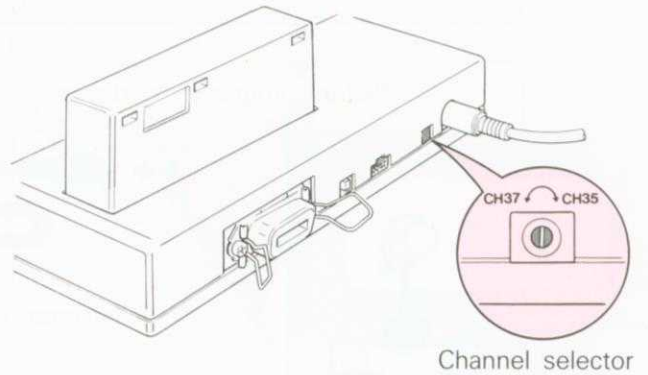
Note: Leave the cartridge in the slot so as to avoid dust accumulation in the slot opening-etc., even if you do not use the pattern programming device.

3

USA: Set the channel selector to channel that is not broadcasting (ex. channel VHF-3).



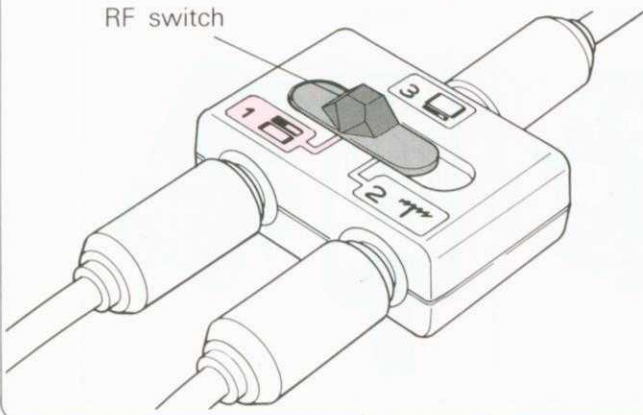
Europe: Channel is preset at UHF-36, so you do not have to set the selector.



4

When you use RF switch, set it to 1.

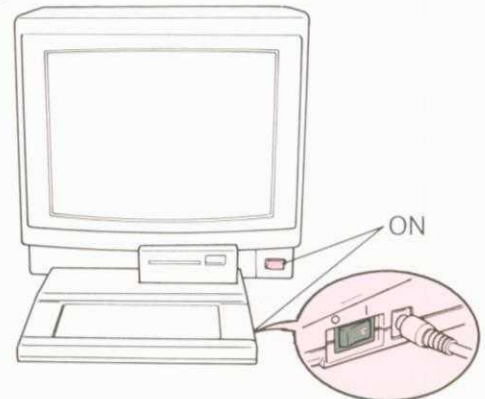
RF switch



*When you watch the TV program, set the RF switch to 2.

5

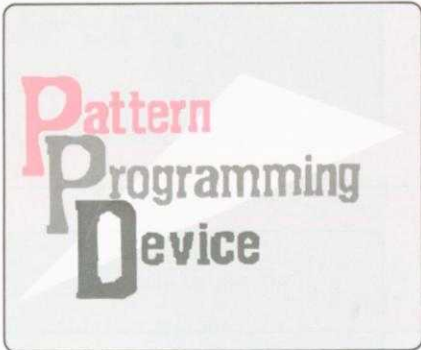
Turn on the power switch to the pattern programming device and TV set.



6

Set the channel of TV set to the same number as the channel selector setting of the pattern programming device.

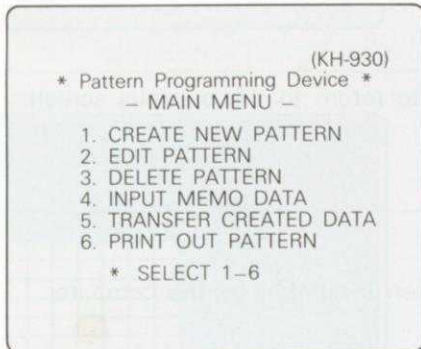
Message as below appears on the screen.



- ♥ If the message does not appear on the screen...
 - Confirm that the pattern programming device and TV set are connected correctly and that power switch of the pattern programming device is on.
 - If your TV set has manual fine tune dial, adjust the picture referring to the instruction book of TV.

7

Push the STEP key.
MAIN MENU appears on the screen.



MAIN MENU

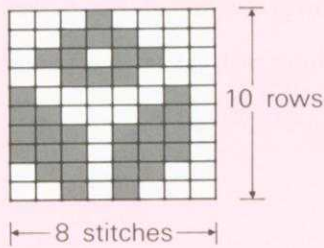
- 1. CREATE NEW PATTERN Use this option to create your own original patterns. (page 7)
- 2. EDIT PATTERN Use this option to modify the pattern that you created. (page 34)
- 3. DELETE PATTERN Use this option to delete an unnecessary pattern or all of patterns you created. (page 35)
- 4. INPUT MEMO DATA Use this option to enter the memo data with information for pattern knitting or to modify the memo data already entered. (page 36)
- 5. TRANSFER CREATED DATA Use this option to save the patterns you created on the disk, or to load the patterns from the disk to the pattern programming device with floppy disk drive unit. (page 37)
- 6. PRINT OUT PATTERN Use this option to print out the patterns you created with printer. (page 42)

CREATE NEW PATTERN (MAIN MENU 1)

♥ Practice the basic operation of the pattern programming device.

1. CREATE NEW PATTERN

ex.



- Create the left pattern.

(KH-930)
* Pattern Programming Device *
- MAIN MENU -
1. CREATE NEW PATTERN
2. EDIT PATTERN
3. DELETE PATTERN
4. INPUT MEMO DATA
5. TRANSFER CREATED DATA
6. PRINT OUT PATTERN
* SELECT 1-6

1

- 1 Select option 1 from main menu by entering 1 with numeral key.

1

♥ HELP KEY

Push the HELP key to return to the previous screen.

- STITCH-ROW SET UP -
PATTERN No. 901
HOW MANY STITCHES
STITCH = ■

2

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

- STITCH-ROW SET UP -
PATTERN No. 901
HOW MANY STITCHES
STITCH = ■

3

- 3 Enter the number of stitches.
(You can enter up to 200 stitches).
(ex... 8 stitches)

8

- ♣ If you may change the pattern area, you should enter the bigger number for stitches and rows than you actually need.

♥ C KEY

If you should make a mistake, push the C key to clear the number that you entered and enter the correct number.

Push the STEP key.

STEP

– STITCH-ROW SET UP –

PATTERN No. 901

HOW MANY STITCHES
STITCH = 8

MAXIMUM ROW IS 998
HOW MANY ROWS
ROW = ■

4 Enter the number of rows.

The display shows the maximum number of rows available for you to use for your own pattern.
(You can use up to 998 rows in this example).

(ex... 10 rows)



– STITCH-ROW SET UP –

PATTERN No. 901

HOW MANY STITCHES
STITCH = 8

MAXIMUM ROW IS 998
HOW MANY ROWS
ROW = 10

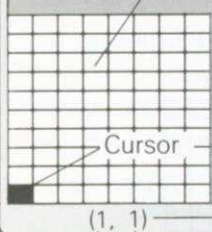
OK? 1:YES 2:NO

5 Confirm the number of stitches and rows.

- When number of stitches and rows are correct, push 1 key. The screen will advance to next step.
- If you want to change the number of stitches or rows, push 2 key. The screen will return to ③.

Pattern creating screen

Pattern creating area



Stitch number Row number Cursor pointer

6 Pattern creating screen appears.

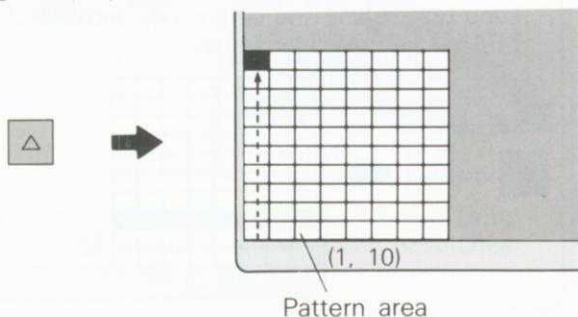
- **PATTERN CREATING SCREEN**
There are 48 stitches and 50 rows on the screen.
- **PATTERN AREA**
There are same number of stitches and rows as you entered before in this area. You can draw a picture in this area.
- **CURSOR**
The cursor shows the current location. You can draw the square where cursor is by pushing the DRAW key.
- **CURSOR POINTER**
The cursor pointer shows the location of cursor by stitch number and row number.

LET'S MOVE THE CURSOR

You can move the cursor using 8 cursor keys when the pattern creating screen appears. However, the cursor moves only in pattern area.

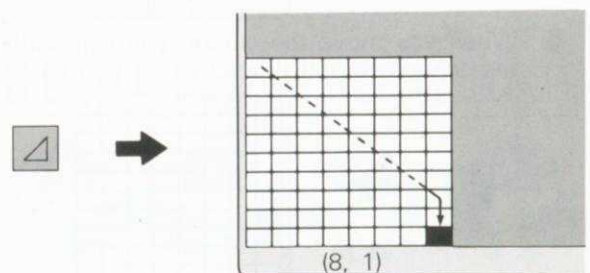
① Try to use key.

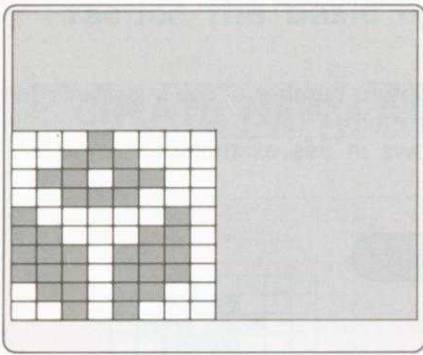
The cursor moves upward by one stitch when you push key. If you continue pushing the key, the cursor keeps on moving. When it comes to an edge, it stops.



② Try to use key.

The cursor moves right-downward obliquely. When it comes to an edge, it moves downward.





7 Draw a picture as illustrated.
(Refer to "HOW TO DRAW A PICTURE ON THE SCREEN").

- When you finish drawing...
Push the HELP key.

HELP

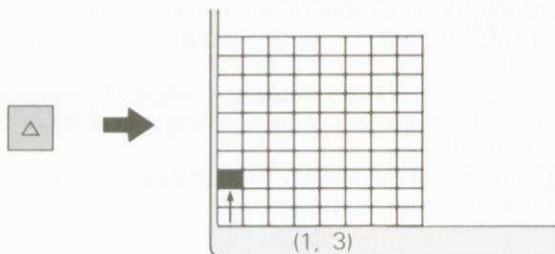
- When you want to stop pattern creation temporarily...
 - Simply turn off the power switch of the pattern programming device and TV set.
 - To continue pattern creation,
 - ① Turn on the power switch of the pattern programming device and TV set.
 - ② Choose option 1 (CONTINUE CREATION) from MAIN MENU and continue drawing.

How to draw a picture on the screen

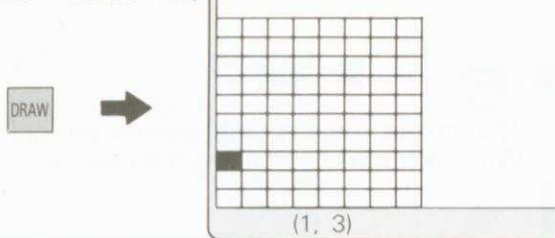
When you draw a picture, use DRAW key and ERASE key.
Move the cursor where you want to draw or erase, then push the DRAW key or ERASE key.

Drawing

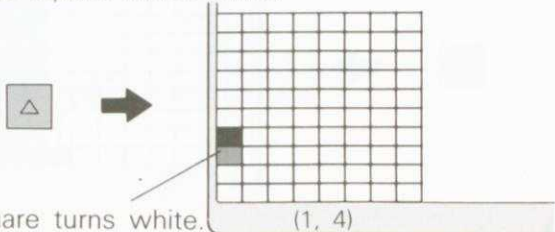
- ① Move the cursor where you want to draw.



- ② Push the DRAW key.
(The blank square will become white after the cursor moves on.)



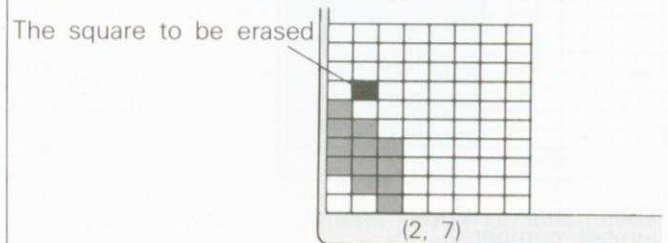
- ③ When you move the cursor, you can confirm the square turned white.



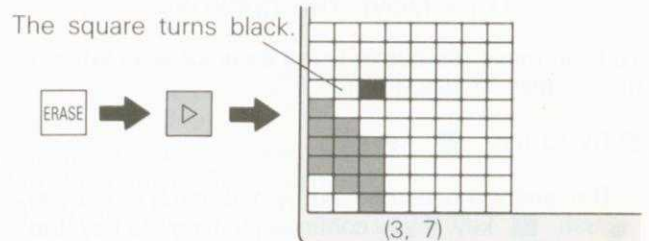
The square turns white.

Erasing

- ① Move the cursor where you want to erase.

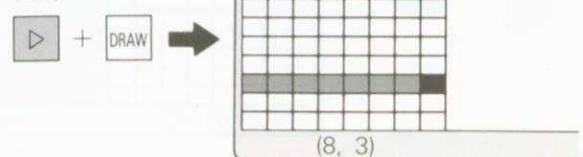


- ② Push the ERASE key and move the cursor.



- If you want to draw or erase the straight line, keep on pushing the cursor key and DRAW (or ERASE) key simultaneously.

(ex.)



– HELP MENU –

1. END CREATION
2. TRANSFER CURSOR
3. SET COLOUR
4. CHANGE COLOUR
5. REDUCTION
6. ERASE PART OF PATTERN
7. LOAD STORED PATTERN
8. VARIATIONS
9. REDUCE PATTERN AREA

* SELECT 1-9

8

HELP MENU appears on the screen.

♣ You can choose sub function from HELP MENU.
If you choose option 2-9, refer to next page.

9

When you want to finish creation, choose option 1 from HELP MENU.

1

MAIN MENU appears on the screen.

* You can not return to previous screen with HELP key when you enter 1 in this step.

2. HOW TO KNIT THE PATTERN YOU CREATED

1

Load the pattern data you created with pattern programming device to the knitting machine. Refer to page 45.

2

You can knit the pattern after pattern program.

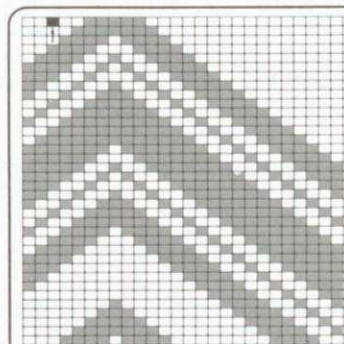
Rolling the screen

If the pattern has more than 48 stitches or 50 rows, roll the screen and continue creation.

• STEPS

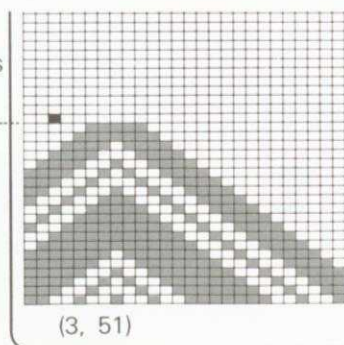
① Move the cursor to an edge.

(ex.) When you roll up the screen



② Move the cursor further.
The screen rolls up.

30 rows



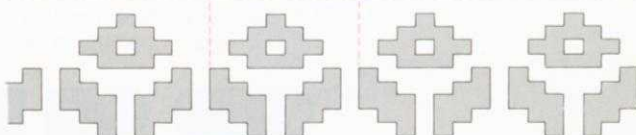
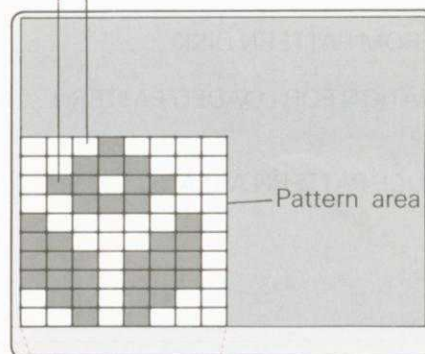
* The screen rolls up or down by 30 rows with or and rolls right or left by 30 stitches with or .

Created pattern and needle selection

- One square represents one stitch.
- Pattern area represents one pattern repeat.
If you choose selector 1, you can knit the pattern all over the garment.

White square drawn by DRAW key...
The needle is selected to D position.

Black square...
The needle is selected to B position.



When you are knitting

HELP MENU

- HELP MENU -

1. END CREATION
2. TRANSFER CURSOR
3. SET COLOUR
4. CHANGE COLOUR
5. REDUCTION
6. ERASE PART OF PATTERN
7. LOAD STORED PATTERN
8. VARIATIONS
9. REDUCE PATTERN AREA

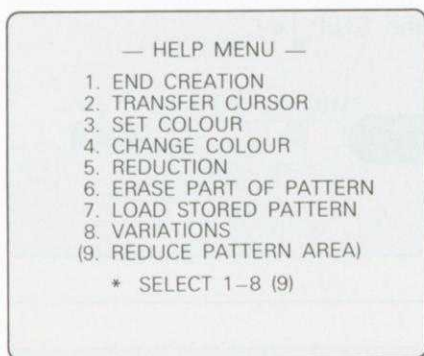
* SELECT 1-8 (9)

- HELP MENU is subfunctions you can use when you work with MAIN MENU 1 (CREATE NEW PATTERN) or 2 (EDIT PATTERN).
- Push the HELP key while pattern creating screen appears and the HELP MENU will appear.

1. END CREATION Use this option to finish pattern creation.
The screen will return to the MAIN MENU. (page 12)
2. TRANSFER CURSOR Use this option to move the cursor directly by specifying the stitch number and row number. (page 12)
3. SET COLOUR Use this option to set the colour of pattern.
And you can see the colour contrast of the pattern. (page 13)
4. CHANGE COLOUR Use this option to change the colour of the pattern. (page 17)
5. REDUCTION Use this option to check the whole pattern by reducing while you are creating a pattern exceeding 48 stitches and/or 50 rows. (page 19)
6. ERASE PART OF PATTERN Use this option to erase a part of pattern. (page 20)
7. LOAD STORED PATTERN Use this option to create the new pattern by combining and also modifying the pattern stored in the pattern programming device or disk.
 - 1) FROM BUILT-IN PATTERN Choose this option to use the pattern that is published in the pattern book attached to electronic knitting machine, or the created patterns stored in the pattern programming device. (page 21)
 - 2) SELECT CHARACTER Choose this option to create the pattern by combining the character that is built into the pattern programming device. (page 24)
 - 3) FROM PATTERN DISK Choose this option to use the pattern that is stored on the disk. (page 27)
8. VARIATION FOR LOADED PATTERN Use this option to vary the pattern that you choose by option 7 into REVERSE, UP SIDE DOWN, DOUBLE WIDTH and DOUBLE LENGTH. (page 30)
9. REDUCE PATTERN AREA Use this option to reduce the pattern area that you are creating now. This option is displayed only when you choose CREATE NEW PATTERN from MAIN MENU. (page 32)

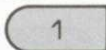
◆◆◆ 1. END CREATION (HELP MENU 1) ◆◆◆

- To finish pattern creation.



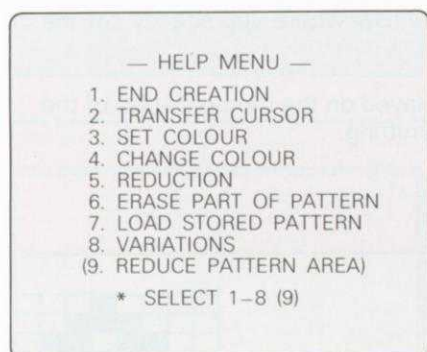
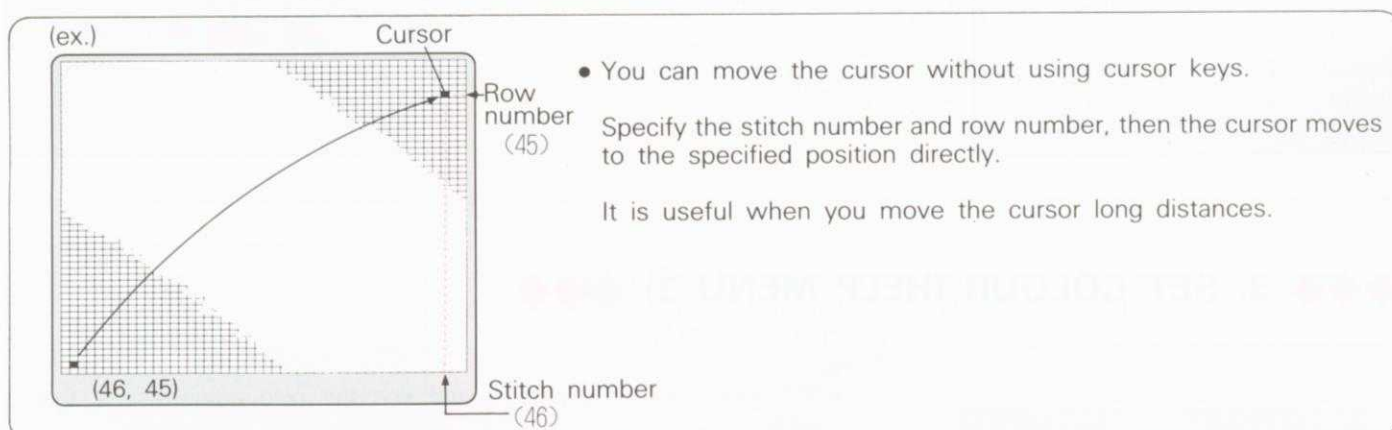
1

Choose option 1 from HELP MENU by entering 1 with the numeral key.



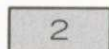
The screen returns to MAIN MENU and you have finished pattern creation.

◆◆◆ 2. TRANSFER CURSOR (HELP MENU 2) ◆◆◆



1

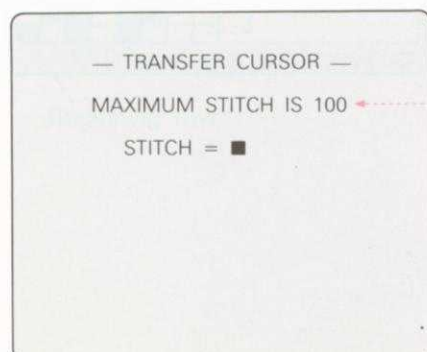
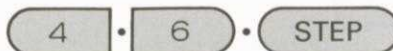
Choose option 2 from HELP MENU by entering 2 with the numeral key.



2

Enter the stitch number where you want to put the cursor.

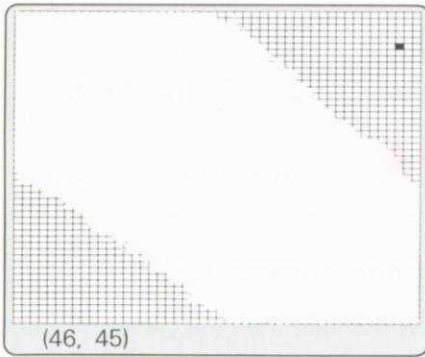
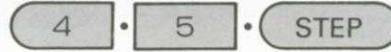
You can move the cursor within the area. Maximum stitch number is displayed. Enter the stitch number within the limit and push the STEP key.
(ex. stitch number ... 46)



— TRANSFER CURSOR —
 MAXIMUM STITCH IS 100
 STITCH = 46
 MAXIMUM ROW IS 134
 ROW = ■

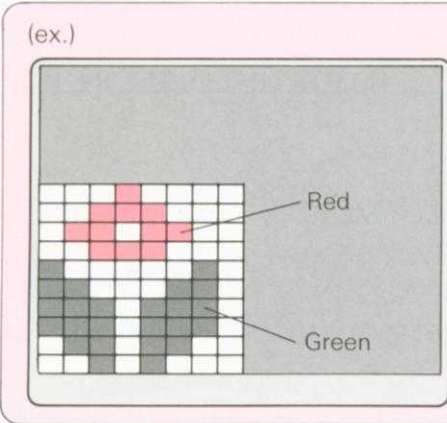
3 Enter the row number where you want to put the cursor.
 Maximum row number is displayed. Enter the row number within the limit and push the STEP key.

(ex. row number ... 45)



4 Pattern creating screen appears and you can see the cursor which is positioned where you specified.

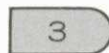
◆◆◆ 3. SET COLOUR (HELP MENU 3) ◆◆◆

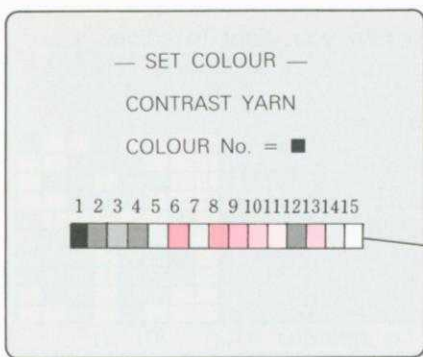


- You can colour the pattern and see the colour contrast of the pattern.
- You can colour both main yarn and contrast yarn.
- You can set the new colour on the row where you already set the colour.
- Colour data of contrast yarn is displayed on the memo display of the knitting machine while you are knitting. (Refer to page 16).

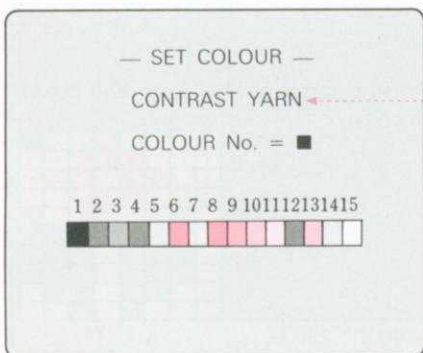
— HELP MENU —
 1. END CREATION
 2. TRANSFER CURSOR
 3. SET COLOUR
 4. CHANGE COLOUR
 5. REDUCTION
 6. ERASE PART OF PATTERN
 7. LOAD STORED PATTERN
 8. VARIATIONS
 (9. REDUCE PATTERN AREA)
 * SELECT 1-8 (9)

1 Choose option 3 from HELP MENU by entering 3 with the numeral key.





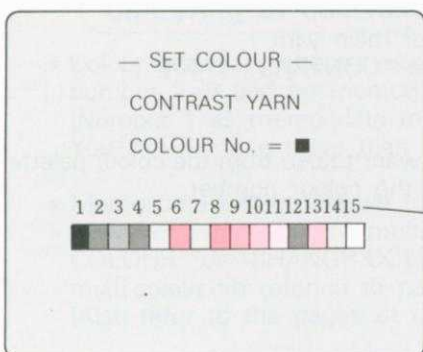
2 A colour palette of 15 colours appears on the screen. You can use these colours for colouring.



3 First choose the contrast yarn or main yarn that you are going to colour.

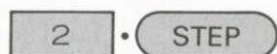
Push the STEP key.
The display shows "MAIN YARN".
Push the STEP key again.
The display shows "CONTRAST YARN".

Whenever you push the STEP key, the display of "CONTRAST YARN" or "MAIN YARN" appears alternately. Choose either one. (In this example choose "CONTRAST YARN".)

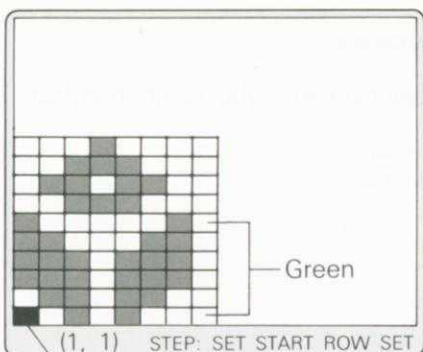


4 Choose the colour that you want to use from the colour palette on the screen by entering the colour number.

Push the STEP key.
* In this example, first colour the leaves and then the flower.
(ex. green (leaves) ... 2)



♣ It is convenient to memorize the colour number when you change the colour.



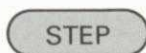
Beginning row

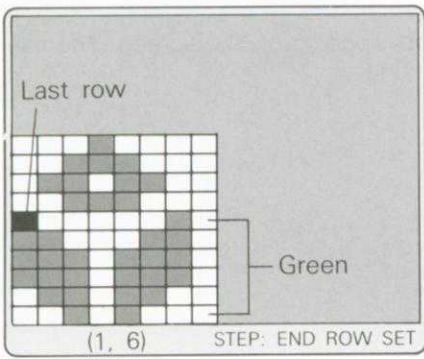
5 Pattern creating screen reappears. Move the cursor to the beginning row you want to colour.

♣ It does not matter if the cursor is on any stitch.

(ex. beginning row ... 1st row)

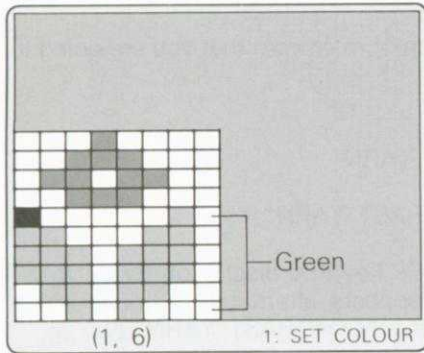
Move the cursor to the first row. Push the STEP key.





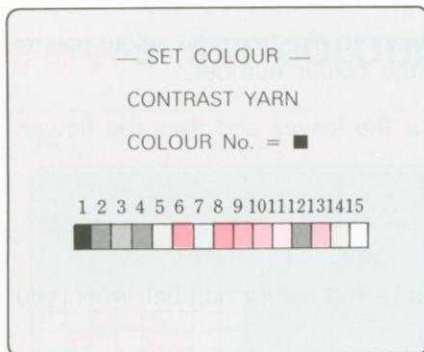
- 6** Move the cursor to the last row you want to colour.
 (ex. last row ... sixth row)
 Move the cursor to the 6th row.
 Push the STEP key.

STEP



- 7** Specified part has colour on it.
 ♣ When you want to colour other parts, push 1 key. The colour palette appears on the screen.
 (ex. Colour the flower.)
 Push 1 key.

1



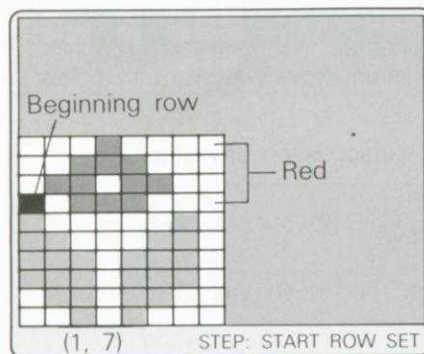
- 8** Choose the contrast yarn or main yarn.
 (ex. In this example choose "CONTRAST YARN".)

- 9** Choose the colour that you want to use from the colour palette on the screen by entering the colour number.
 Push the STEP key.

(ex. red (flower) ... 8)

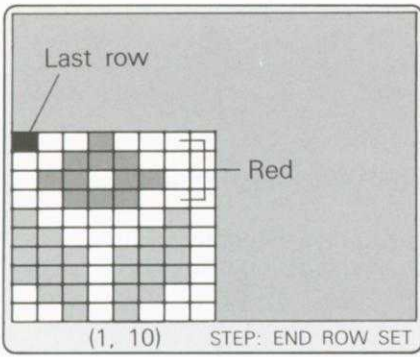
8

STEP



- 10** Pattern creating screen reappears.
 Move the cursor to the beginning row you want to colour.
 (ex. beginning row ... 7th row)
 Move the cursor to the 7th row.
 Push the STEP key.

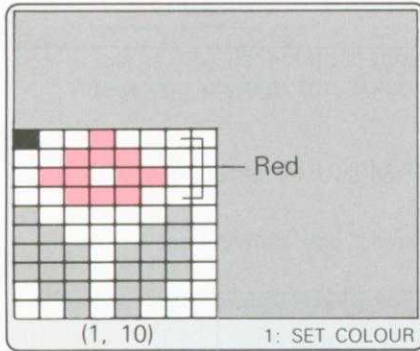
STEP



- 11** Move the cursor to the last row you want to colour.
(ex. last row ... 10th row)

Move the cursor to the 10th row.
Push the STEP key.

STEP



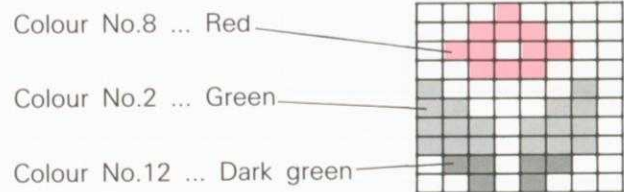
- 12** Specified part has colour on it.

*When you want to choose other options from HELP MENU,
push the HELP key.

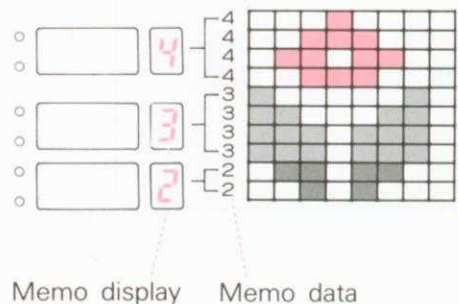
Colouring of contrast yarn and memo data

- Colour data that you enter using option "SET COLOUR" and "CHANGE COLOUR" will automatically convert to number 2-9 and be memorized in the pattern programming device as memo data.
(Number 1 as memo data represents main yarn.)
You can not use more than 9 colours for the contrast yarn.
- Memo data will be shown on memo display of the knitting machine while you knit.
However, when you knit multi-colour rib setting the KRC key on, memo data you entered working with "SET COLOUR" or "CHANGE COLOUR" will not be converted for multi-colour rib, therefore enter memo data for multi-colour rib referring to page 36.
(Also refer to the pages of memo program for electronic knitting machine manual.)

(ex.) When you colour contrast yarn as below

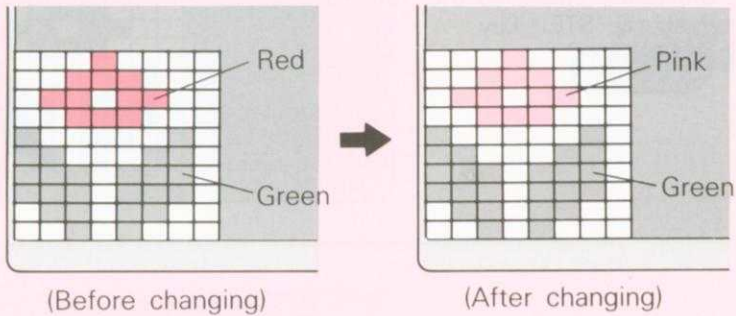


- Each colour is given number 2, 3, 4, ... from the bottom (the number represents contrast yarn).



◆◆◆ 4. CHANGE COLOUR (HELP MENU 4) ◆◆◆

(ex.) You change red into pink.



- You can change the colour of the pattern.
- It is convenient to use this option when there are many rows of colour you want to change or stripes, etc.

— HELP MENU —

1. END CREATION
 2. TRANSFER CURSOR
 3. SET COLOUR
 4. CHANGE COLOUR
 5. REDUCTION
 6. ERASE PART OF PATTERN
 7. LOAD STORED PATTERN
 8. VARIATIONS
 - (9. REDUCE PATTERN AREA)
- * SELECT 1-8 (9)

1

Choose option 4 from HELP MENU by entering 4 with the numeral key.

4

— CHANGE COLOUR —

ORIGINAL COLOUR No. = ■

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

2

Choose the colour that you want to change from the colour palette by entering the colour number and push the STEP key.

(ex. red ... 8)

8

STEP

— CHANGE COLOUR —

ORIGINAL COLOUR No. = 8

NEW COLOUR No. = ■

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

3

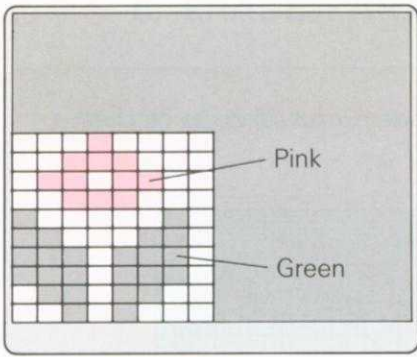
Choose the new colour by entering the colour number and push the STEP key.

(ex. pink ... 13)

1

3

STEP



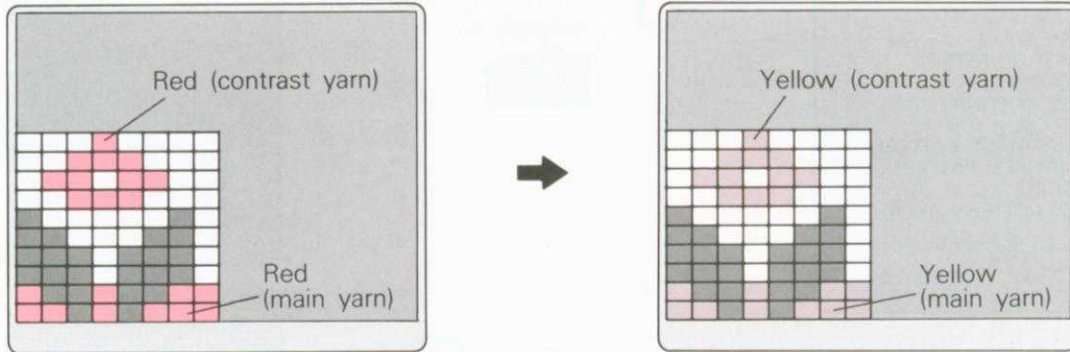
4 The screen returns to pattern creating screen, and you can see that the colour is changed as you specified.

*When you want to choose other options from HELP MENU, push the HELP key.

Note

- There is no distinction between the main yarn and contrast yarn in the option of CHANGE COLOUR. When you change the colour, every part coloured in the same colour is changed automatically.

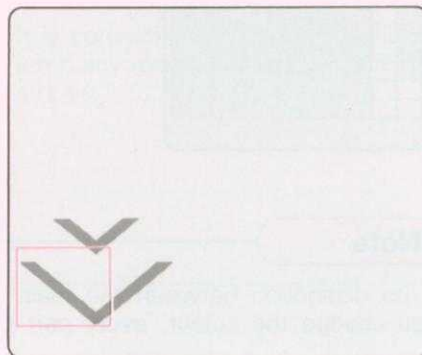
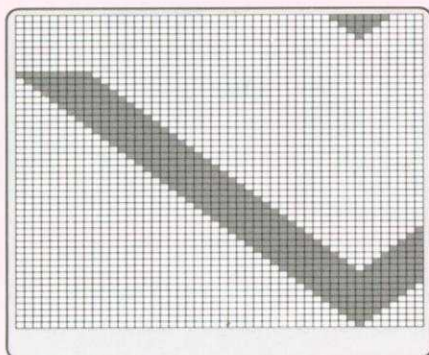
(ex.) When you change the red into yellow



◆◆◆ 5. REDUCTION (HELP MENU 5) ◆◆◆

- You can check the whole pattern by reducing while you are creating a pattern exceeding 48 stitches.

(ex.)



— HELP MENU —

1. END CREATION
2. TRANSFER CURSOR
3. SET COLOUR
4. CHANGE COLOUR
5. REDUCTION
6. ERASE PART OF PATTERN
7. LOAD STORED PATTERN
8. VARIATIONS
- (9. REDUCE PATTERN AREA)

* SELECT 1-8 (9)

1

Choose option 5 from HELP MENU by entering 5 with the numeral key.

5

2

You can see the whole pattern that you are drawing now by reducing it.

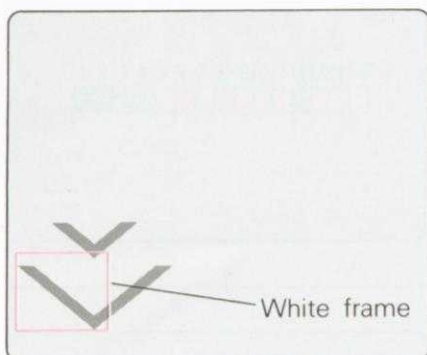
♣ Reduced pattern screen

- There are 200 stitches and 200 rows on the screen.
- The white frame of square which is shown on the screen indicates the part of pattern that you can see it on the pattern creating screen.
When you want to see other parts of the pattern, move the white frame with cursor keys.
- If you are creating a pattern exceeding 200 rows, you can roll the screen up or down by 180 rows by moving the white frame with the cursor key.

3

Push the STEP key.
The screen returns to pattern creating screen.

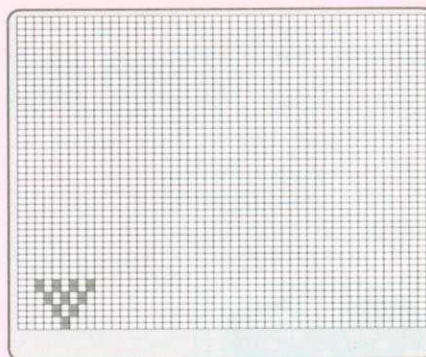
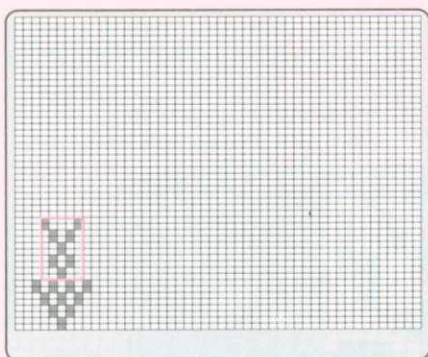
STEP



◆◆◆ 6. ERASE PART OF PATTERN (HELP MENU 6) ◆◆◆

- You can erase a part of the pattern by framing the part.

(ex.)



— HELP MENU —

1. END CREATION
2. TRANSFER CURSOR
3. SET COLOUR
4. CHANGE COLOUR
5. REDUCTION
6. ERASE PART OF PATTERN
7. LOAD STORED PATTERN
8. VARIATIONS
- (9. REDUCE PATTERN AREA)

* SELECT 1-8 (9)

1

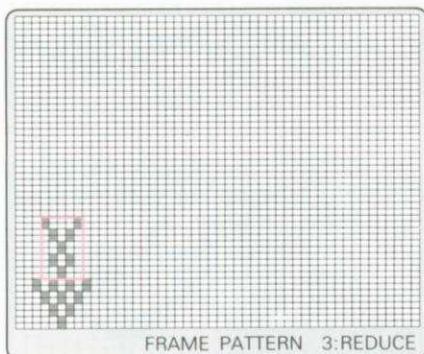
Choose option 6 from HELP MENU by entering 6 with the numeral key.

6

2

Frame the part of the pattern which you want to erase.

- Refer to "HOW TO FRAME THE PART OF PATTERN" on page 33.
- If you want to erase the whole pattern part, push 1 key and advance to ③.



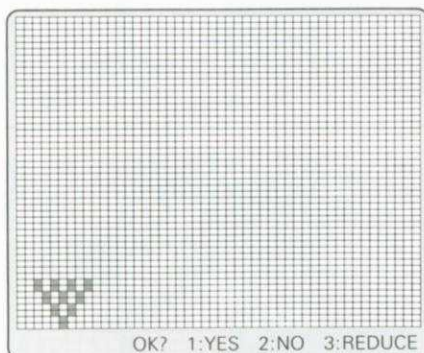
3

The part in the frame will disappear.

Make sure that you erased correctly.

♥ If you check the whole pattern by _____ reducing the pattern...

- ① Push 3 key. Reduced pattern appears on the screen.
* If you want to see other part of pattern on the pattern creating screen, move the white frame with cursor keys.
- ② Push the STEP key. The screen returns to pattern creating screen.



- When you have erased correctly, push 1 key.
- To restore the pattern, push 2 key.

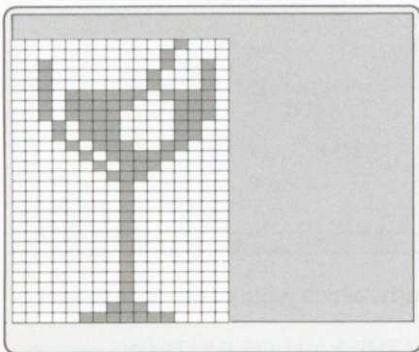
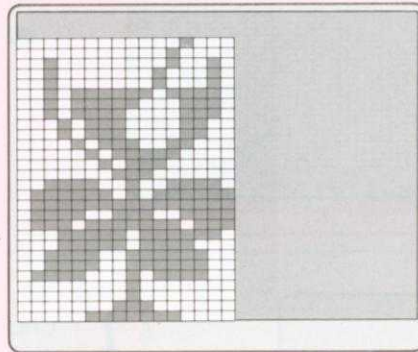
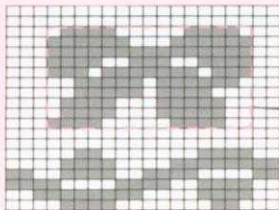
* When you want to choose other options from HELP MENU, push the HELP key.

◆◆◆ 7. LOAD STORED PATTERN (HELP MENU 7) ◆◆◆

1 FROM BUILT-IN PATTERN

- You can load the pattern that is published in the pattern book attached to electronic knitting machine and the created patterns stored in the pattern programming device, and modify or combine them in order to create a new pattern.
- If you overlay a pattern onto another, you can create an overlapped pattern.
- Even if the pattern that you are going to load has memo data, it will not be loaded.

(ex.) When you overlay the pattern in the pattern book (No. 55) onto your original pattern...



- 1 First, create the pattern of a glass as shown in the illustration. (Refer to steps 1-7 page 7-9. Enter the pattern area as below.)

— Pattern area —
 Number of stitches : 16 stitches
 Number of rows : 28 rows

After drawing the pattern of glass, push the HELP key.

— HELP MENU —
 1. END CREATION
 2. TRANSFER CURSOR
 3. SET COLOUR
 4. CHANGE COLOUR
 5. REDUCTION
 6. ERASE PART OF PATTERN
 7. LOAD STORED PATTERN
 8. VARIATIONS
 (9. REDUCE PATTERN AREA)
 * SELECT 1-8 (9)

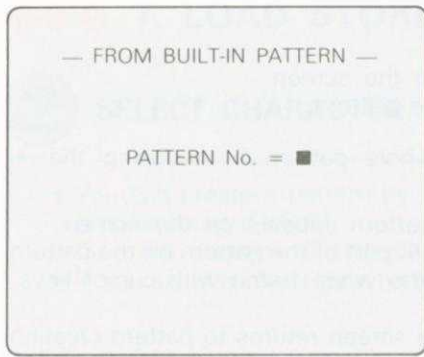
- 2 Choose option 7 from HELP MENU by entering with numeral key.

7

— LOAD STORED PATTERN —
 1. FROM BUILT-IN PATTERN
 2. SELECT CHARACTER
 3. FROM PATTERN DISC
 * SELECT 1-3

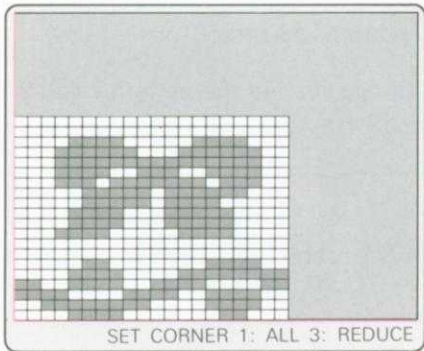
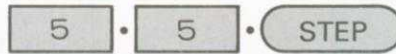
- 3 Choose option 1 from menu of LOAD STORED PATTERN.

1

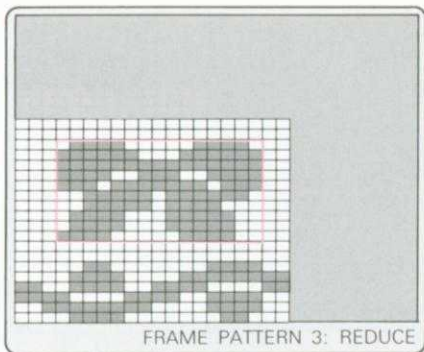


3 Choose the pattern that you want to use from the pattern book attached to electronic knitting machine or from your created patterns which are stored in the pattern programming device and enter the pattern number with numeral key. Push the STEP key.

(ex. pattern number ... 55)

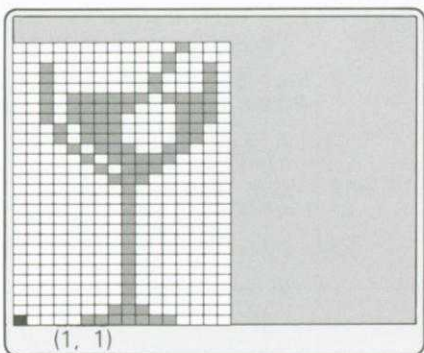


4 The pattern that you specified appears on the screen.

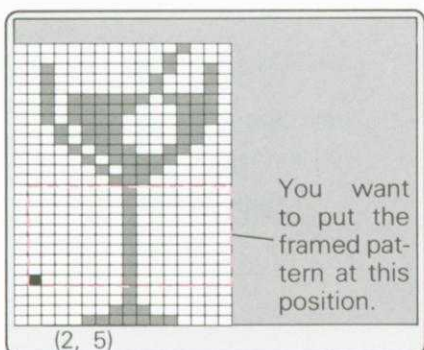


5 Frame the part of the pattern which you want to use.
(In this example, you use only ribbon).

- Refer to "HOW TO FRAME THE PART OF A PATTERN" on page 33.
- If you want to use the whole pattern, push 1 key and advance to ⑥

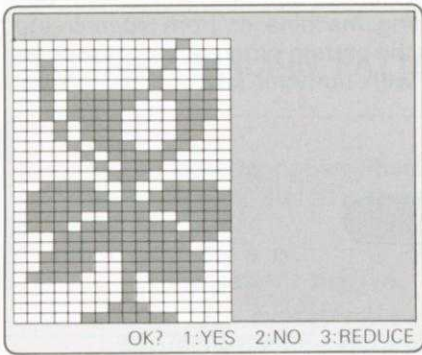


6 The screen returns to the pattern creating screen.



7 Move the cursor to the lower left corner of the position to which you want to put the framed pattern. Push the STEP key.





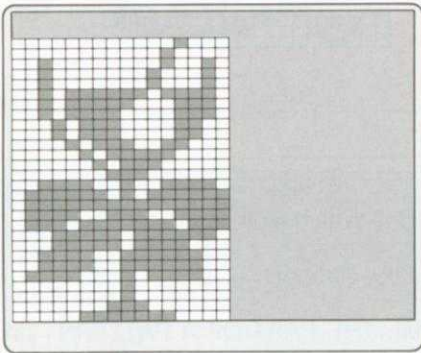
8

Framed pattern appears on the screen.
Confirm the position of the pattern.

♥ If you check the whole pattern by reducing the pattern...

- ① Push 3 key. Reduced pattern appears on the screen.
If you want to see another part of the pattern on the pattern creating screen, move the white frame with cursor keys.
- ② Push the STEP key. The screen returns to pattern creating screen.

- When the position of the pattern is correct, push 1 key.
- When you want to change the position of the pattern, push 2 key. The screen will return to ⑦.

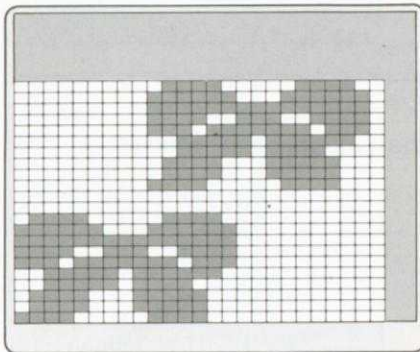


9

Modify the drawing with DRAW key and ERASE key to complete the pattern.

*When you want to choose other options from HELP MENU, push the HELP key.

If you want to put the same pattern in several places...



- The framed pattern does not change until you choose another pattern or following case:
- When you choose option "END CREATION", "ERASE PART OF PATTERN" or "REDUCE PATTERN AREA".
- When you turn off the power switch.

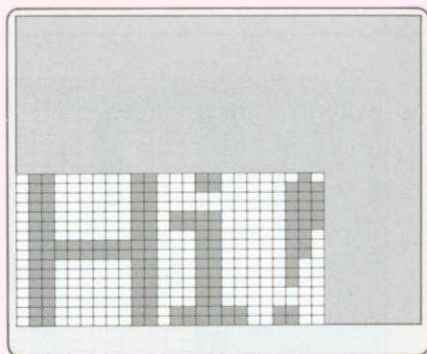
Repeat operation steps ⑦-⑧.

◆◆◆ 7. LOAD STORED PATTERN (HELP MENU 7) ◆◆◆

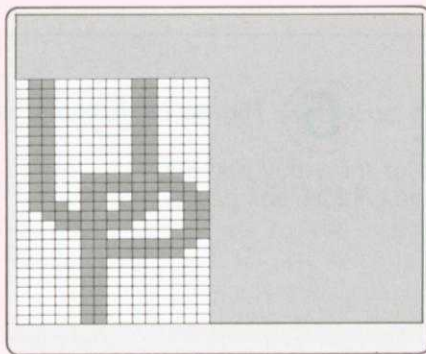
2 SELECT CHARACTER

- You can create a pattern by combining the character (alphabet, number and so on) that is built into pattern programming device.
(See the diagram of character on page 48).
- If you overlay the character onto another, you can create an overlapped pattern.

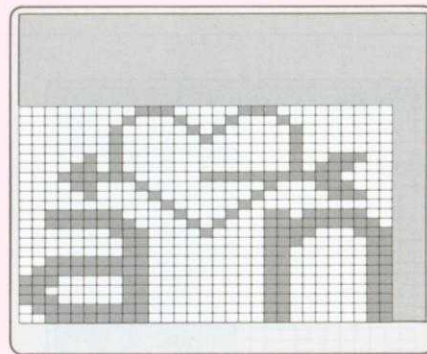
(ex. 1)



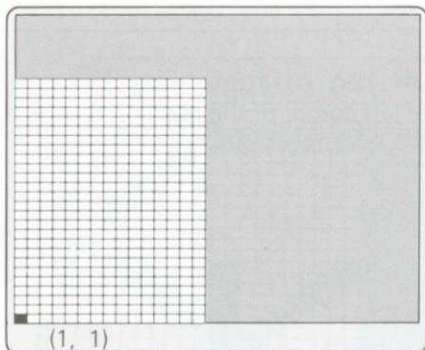
(ex. 2)



(ex. 3)



- This example uses the pattern (ex. 2), and operation for (ex. 1) and (ex. 3) is the same as (ex. 2).



1

Prepare the pattern creating screen. Refer to steps ①–⑥ on page 7–9. Enter the pattern area as below.

Pattern area

Number of stitches: 15 stitches
Number of rows : 26 rows

When the pattern creating screen appears, push the HELP key.

– HELP MENU –

1. END CREATION
2. TRANSFER CURSOR
3. SET COLOUR
4. CHANGE COLOUR
5. REDUCTION
6. ERASE PART OF PATTERN
7. LOAD STORED PATTERN
8. VARIATIONS
- (9. REDUCE PATTERN AREA)

* SELECT 1–8 (9)

2

Choose option 7 from HELP MENU by entering with numeral key.

7

– LOAD STORED PATTERN –

1. FROM BUILT-IN PATTERN
2. SELECT CHARACTER
3. FROM PATTERN DISC

* SELECT 1–3

3

Choose option 2 from menu of LOAD STORED PATTERN.

2

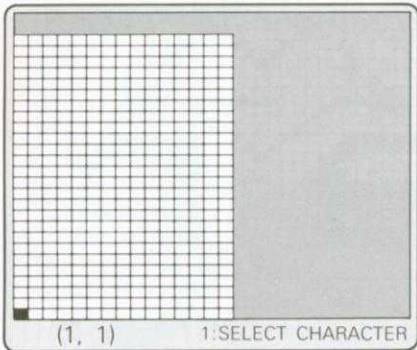


4 Characters appear on the screen.

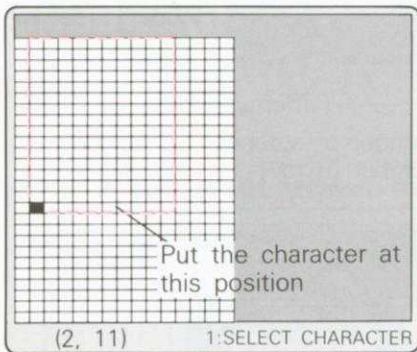
Using the cursor key (▲ · ▼ · ◀ · ▶), move the cursor "▲" under the character that you want to use.
(ex. Move the cursor "▲" under the "U".)

Push the STEP key.

STEP



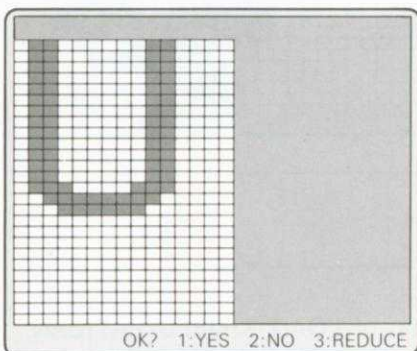
5 The screen returns to the pattern creating screen.



6 Move the cursor to the lower left corner of the position to which you want to put the character.

Push the STEP key.

STEP

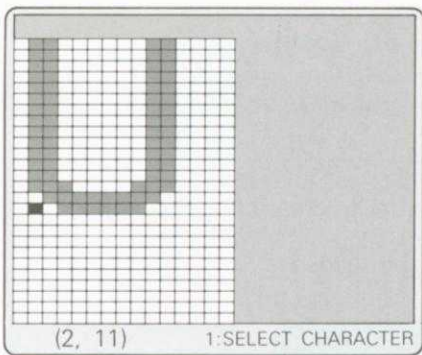


7 The character appears on the screen.
Confirm the position of the character.

♥ If you check the whole pattern by reducing the pattern...

- ① Push 3 key. Reduced pattern appears on the screen.
* If you want to see other part of pattern on the pattern creating screen, move the white frame with cursor keys.
- ② Push the STEP key.
The screen returns to pattern creating screen.

- When the position of the character is correct, push 1 key.
- When you want to change the position of the character, push 2 key. The screen will return to ⑥.

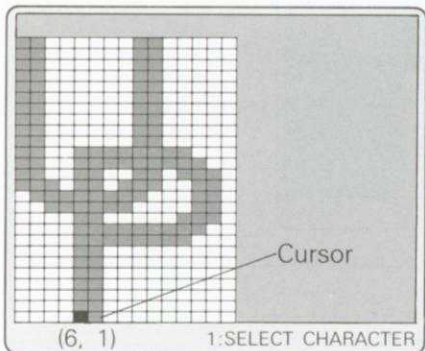
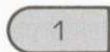


8

You have finished setting the character.

♥ If you want to select another character, push 1 key.
The screen returns to ④.

(ex. Choose character "P".)
Push 1 key.

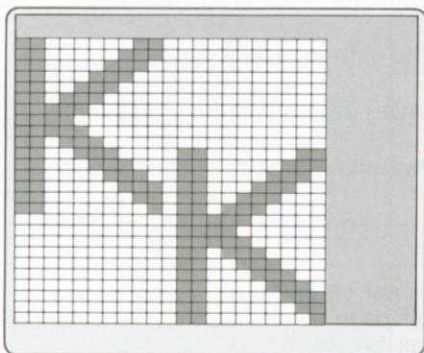


9

Set "P" as you do "U". (Refer to steps ④-⑦.)

*When you want to choose other options from HELP MENU,
push the HELP key.

If you want to put the same character in several places...



- The character does not change until you choose other character or pattern or following case:
 - When you choose option "END CREATION", "ERASE PART OF PATTERN", or "REDUCE PATTERN AREA".
 - When you turn off the power switch.

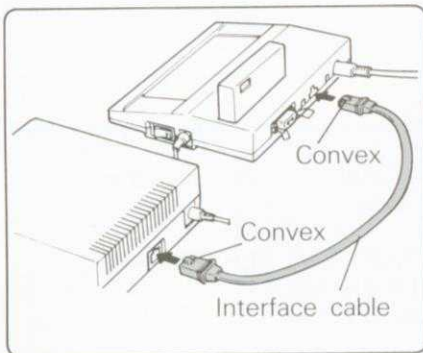
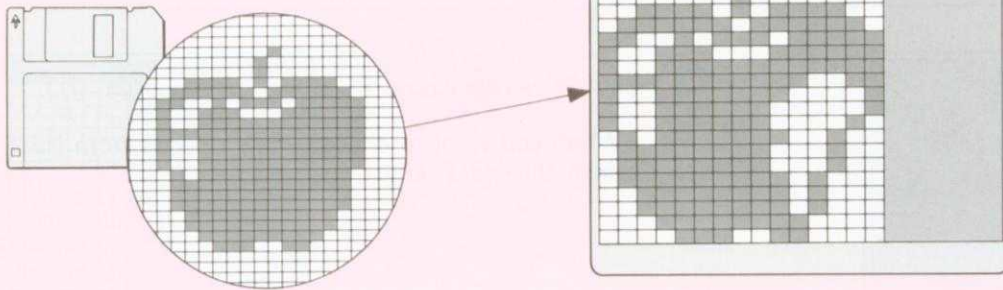
Repeat operation steps ⑥-⑦ on page 25.

◆◆◆ 7. LOAD STORED PATTERN (HELP MENU 7) ◆◆◆

3 FROM PATTERN DISC

- You can load the pattern stored on the disc and modify or combine them in order to create the new pattern.
- If you overlay a pattern onto another, you can create an overlapped pattern.
- Even if the pattern that you are going to load has memo data, it will not be loaded.

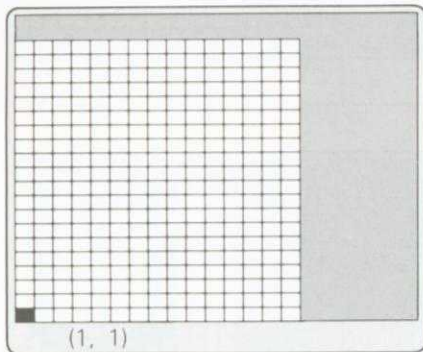
(ex.) Create the pattern of "nibbled apple" using the pattern of "apple" stored on the disc.



• Preparation of floppy disc drive unit

- * Please read the instruction manual of the floppy disc drive unit and also read the pages of "FLOPPY DISC DRIVE UNIT" of electronic knitting machine manual.
- * The drive unit should be placed in front of the TV screen and not in the back of the TV screen for it to work normally.

- ① Turn off the power switch of the pattern programming device and drive unit.
- ② Connect the pattern programming device and drive unit with interface cable.
- ③ Turn on the power switch of pattern programming device and drive unit.



- 1 Prepare the pattern creating screen. Refer to steps ①-⑥ on page 7-9. Enter the pattern area as below.

— Pattern area —
 Number of stitches: 15 stitches
 Number of rows : 20 rows

When the pattern creating screen appears, push the HELP key.

- HELP MENU —
1. END CREATION
 2. TRANSFER CURSOR
 3. SET COLOUR
 4. CHANGE COLOUR
 5. REDUCTION
 6. ERASE PART OF PATTERN
 7. LOAD STORED PATTERN
 8. VARIATIONS
 - (9. REDUCE PATTERN AREA)
- * SELECT 1-8 (9)

- 2 Choose option 7 from HELP MENU by entering 7 with numeral key.

7

– LOAD STORED PATTERN –

1. FROM BUILT-IN PATTERN
2. SELECT CHARACTER
3. FROM PATTERN DISC

* SELECT 1-3

3

Choose option 3 from menu of LOAD STORED PATTERN.

3

CONNECT INTERFACE CABLE

TURN POWER ON!

PUSH STEP KEY!!

4

After confirming that drive unit is connected to pattern programming device and the power switch of the drive unit is on, push the STEP key.

STEP

– FROM PATTERN DISC –

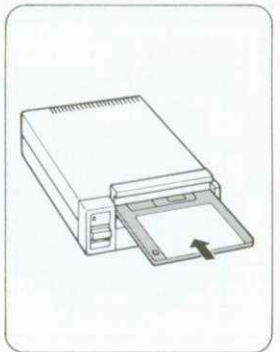
INSERT DISK!

PUSH STEP KEY !!

5

Insert the disk that saved the pattern you want to use into floppy disk drive unit and push the STEP key.

STEP



– FROM PATTERN DISC –

INPUT TRACK No. = ■

6

Enter the track number in which the required pattern is saved with the numeral key and push the STEP key.

(ex. track number...1)

1

STEP

– FROM PATTERN DISC –

INPUT TRACK No. = 1

PATTERN No. = ■

7

Enter the pattern number with the numeral key and push the STEP key.

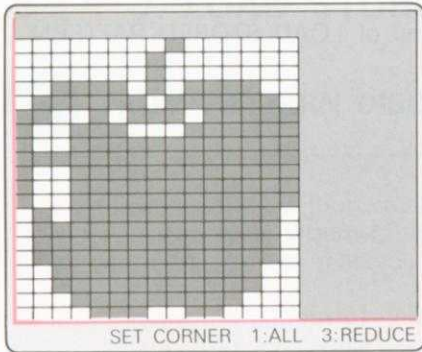
(ex. pattern number...901)

9

0

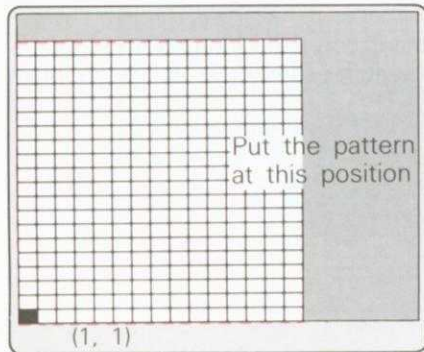
1

STEP



- 8** The pattern that you specified appears on the screen. Specify the part of the pattern which you want to use. (ex. You use the whole pattern, so push the 1 key.)

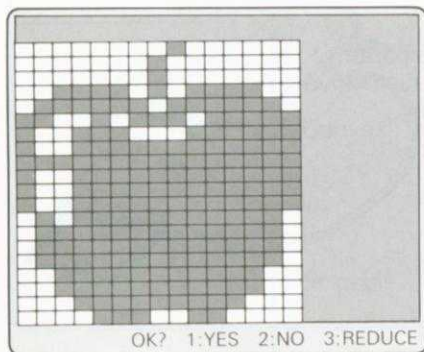
♥ If you want to use a part of the pattern, frame the part referring to page 33.



- 9** The screen returns to the pattern creating screen. Move the cursor to the lower left corner of the position to which you want to put the pattern.

Push the STEP key.

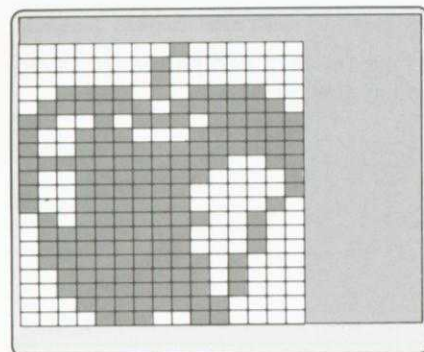
STEP



- 10** The pattern appears on the screen. Confirm the position of the pattern.

♥ If you check the whole pattern by reducing the pattern, refer to ⑧ page 23.

- When the position of the pattern is correct, push 1 key.
 - When you want to change the position of the character, push 2 key.
- The screen will return to ⑨.



- 11** Modify the drawing with DRAW key and ERASE key to complete the pattern.

*When you want to choose other options from HELP MENU, push the HELP key.

If you want to put the same pattern in several places...

- The framed pattern does not change until you choose other patterns or following cases:
 - When you choose option "END CREATION", "ERASE PART OF PATTERN" or "REDUCE PATTERN AREA".
 - When you turn off the power switch.
 Repeat operation steps ⑨-⑩.

If you want to load another pattern from the disc

- Push the HELP key and follow steps ②-③ page 27. The screen returns to ⑦ because the pattern programming device memorizes the track number you loaded before.
 - If you use this track, enter the pattern number.
 - If you want to load a pattern from another track of disk, push the HELP key to return to ⑤.

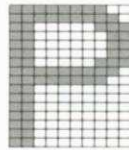
◆◆◆ 8. VARIATIONS FOR LOADED PATTERN (HELP MENU 8) ◆◆◆

You can vary the pattern that you chose by option 7 (LOAD STORED PATTERN) into REVERSE, UP SIDE DOWN, DOUBLE WIDTH and DOUBLE LENGTH.

- Variation setting remains unchanged until you set it again.
Any pattern you load using option 7 will be changed according to variation setting.
(When you choose option "END CREATION" or "REDUCE PATTERN AREA", or you turn off the power switch of pattern programming device, all – functions are set to OFF.)
- Variation setting does not change the picture drawn by DRAW key or the pattern you loaded before you set the variation function.
- You can combine 4 functions freely.

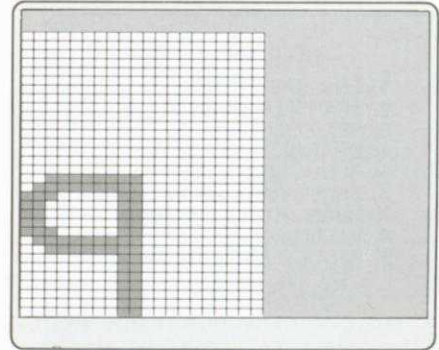
• Set the REVERSE function to ON.

REVERSE ON OFF



(ex.) loaded pattern

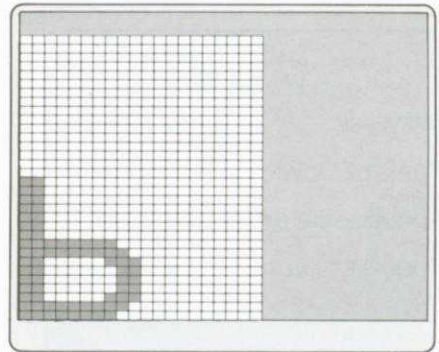
(ex. 1)



• Set the UP SIDE DOWN function to ON.

UP SIDE DOWN ON OFF

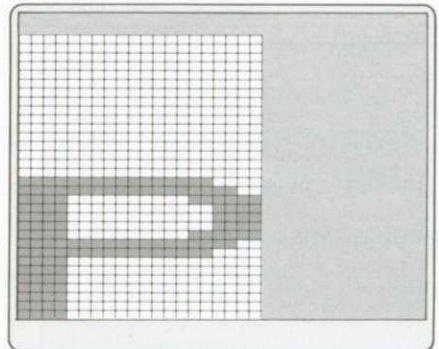
(ex. 2)



• Set the DOUBLE WIDTH function to ON.

DOUBLE WIDTH ON OFF

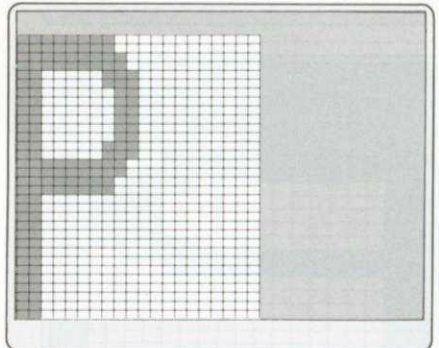
(ex. 3)



• Set the DOUBLE LENGTH function to ON.

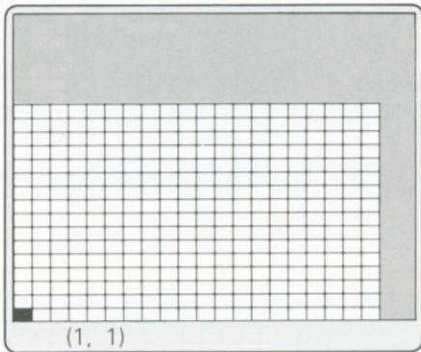
DOUBLE LENGTH ON OFF

(ex. 4)



• SETTING OF VARIATION FUNCTION

This example uses pattern (ex. 3) on page 30.



- 1** Prepare the pattern creating screen.
(Refer to steps ①–⑥ on page 7–9.
Enter the pattern area as below.)

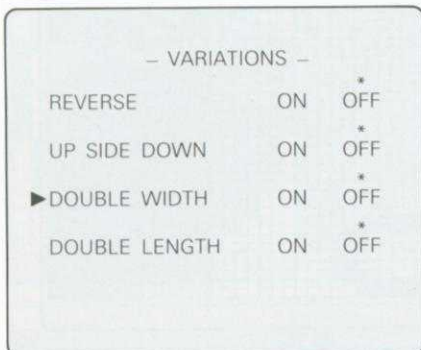
(ex. 3) Pattern area

Number of stitches: 20 stitches
Number of rows : 16 rows

When the pattern creating screen appears, push the HELP key.

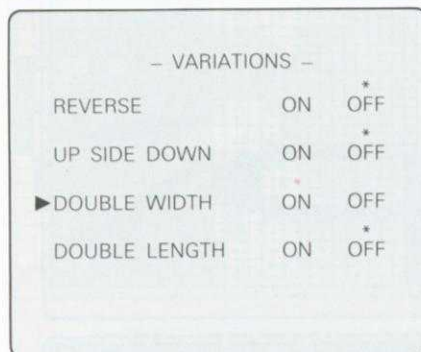


- 2** Choose option 8 from HELP MENU by entering 8 with numeral key.



- 3** Using the cursor key (◀·▶), move the cursor "▶" to the function you want to use or cancel.

(ex. Choose the DOUBLE WIDTH.)
Move the cursor "▶" to DOUBLE WIDTH.



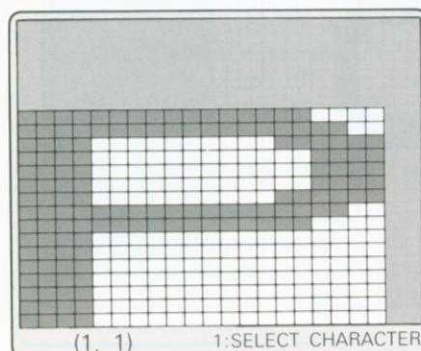
- 4** Using the cursor key (◀·▶), move the asterisk "*" to ON or OFF.

(ex. Set the DOUBLE WIDTH to ON.)



Asterisk moves to ON and now DOUBLE WIDTH function works.

♥ When you want to choose other functions, repeat steps ③–④.



- 5** When you finish VARIATION setting, push the STEP key. Pattern creating screen reappears.



- 6** Push the HELP key and choose option 7 from HELP MENU. Load the character "P" (refer to ②–⑥ page 24–25). Double width pattern appears on the screen.

◆◆◆ 9. REDUCE PATTERN AREA (HELP MENU 9) ◆◆◆

- You can reduce the area of the pattern that you are creating now by framing the necessary area.
- This option can be used only when you choose CREATE NEW PATTERN of MAIN MENU.

— HELP MENU —

1. END CREATION
2. TRANSFER CURSOR
3. SET COLOUR
4. CHANGE COLOUR
5. REDUCTION
6. ERASE PART OF PATTERN
7. LOAD STORED PATTERN
8. VARIATIONS
9. REDUCE PATTERN AREA

* SELECT 1-9

1

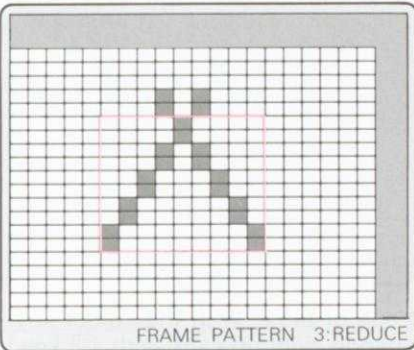
Choose option 9 from HELP MENU by entering 9 with the numeral key.

9

2

Frame the part of the pattern which you want to use.

- Refer to "HOW TO FRAME THE PART OF PATTERN" on page 33.

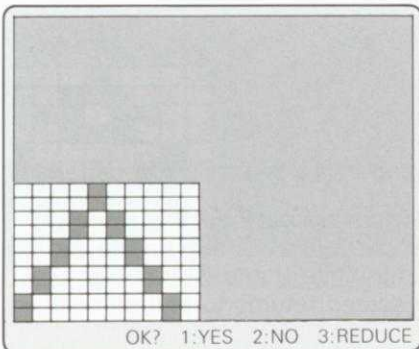


3

The pattern is reduced to new area and appears on the screen. Confirm the new pattern area is correct.

♥ If you check the whole pattern by reducing the pattern...

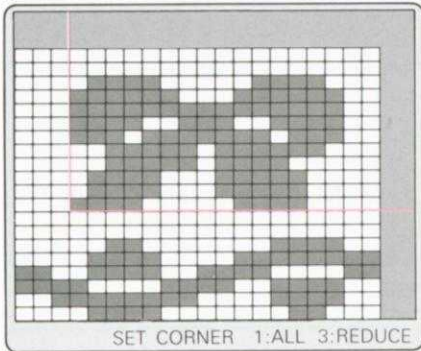
- ① Push 3 key. Reduced pattern appears on the screen. Confirm the pattern area.
* If you want to see another part on the pattern creating screen, move the white frame with cursor keys.
- ② Push the STEP key. The screen returns to pattern creating screen.



- When the pattern area is correct, push 1 key.
- When you restore the pattern, push 2 key.

◆◆◆ HOW TO FRAME A PART OF A PATTERN ◆◆◆

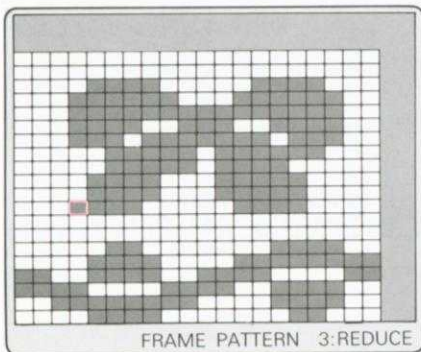
- When you specify the part of the pattern you want to use or erase, frame the part with white square.



- 1 Cross line is displayed at the lower left corner of the screen.

Move the cross line to the lower left corner of the area you want to use or erase.

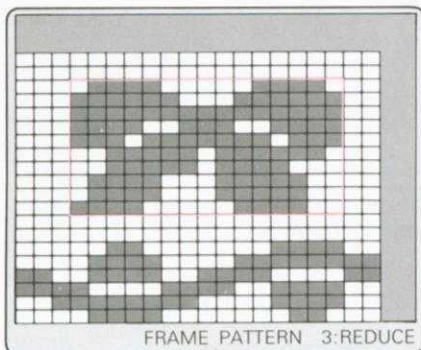
- ♥ If you want to check the whole pattern by reducing the pattern, refer to the lower part of this page.




- 2 Push the STEP key.

STEP

Cross line is changed into a white frame of square.



- 3 Frame the area you want to use or erase with the cursor key. (For example the square expands right-upward with  key.)

- ♥ If you want to check the whole pattern by reducing the pattern, refer to the lower part of this page.

After framing push the STEP key.

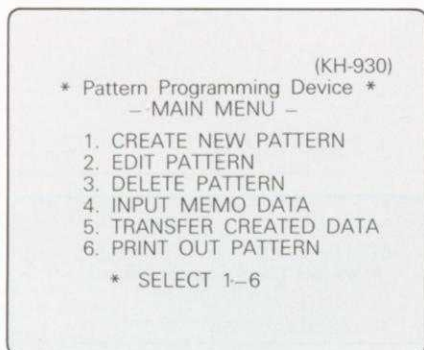
STEP

- ♥ If you check the whole pattern by reducing the pattern...

- 1 Push 3 key. Reduced pattern appears on the screen.
*If you want to see other part of the pattern on the pattern creating screen, move the white frame with cursor keys.
- 2 Push the STEP key. The screen returns to pattern creating screen.

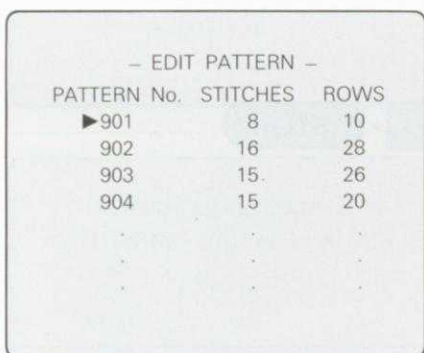
EDIT PATTERN (MAIN MENU 2)

- You can modify the pattern that you created.
- You can use HELP MENU functions when you work with EDIT PATTERN as you do with CREATE NEW PATTERN. (However, you cannot use option 9 REDUCE PATTERN AREA.)



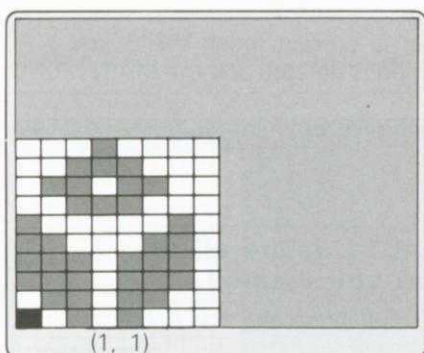
- 1** Select option 2 from MAIN MENU by entering 2 with numeral key.

2



- 2** The list of patterns that you created is displayed on the screen.

Using the cursor key (▲·▼), move the cursor "▶" to the pattern number that you want to edit.



- 3** Push the STEP key.

STEP

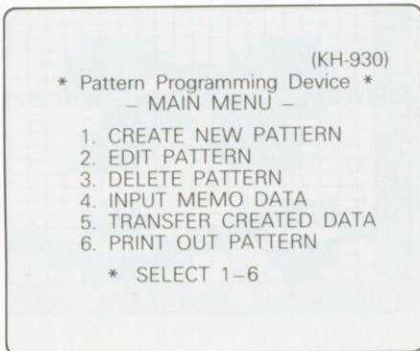
The pattern that you specified appears on the screen.

*After this, edit the pattern using the same procedure as "CREATE NEW PATTERN" (Refer to ⑦-⑧ page 9-10).

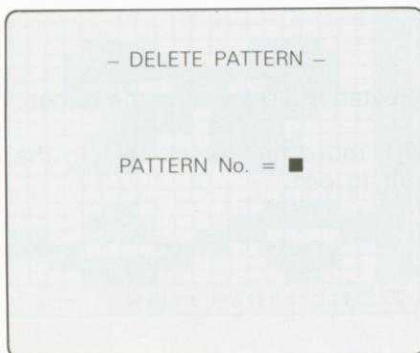
- ♣ When you load the pattern that you coloured with option "SET COLOUR", the pattern on the screen has no colour on it, but memo data remains in the memory as they are.

DELETE PATTERN (MAIN MENU 3)

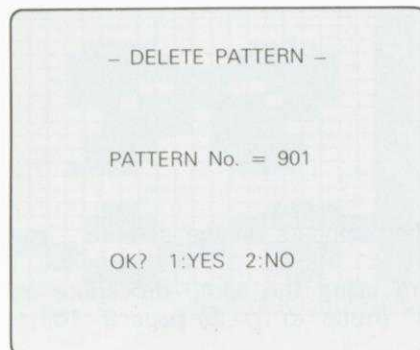
- You can delete an unnecessary pattern or all of patterns you created.



- 1** Select option 3 from MAIN MENU by entering 3 with numeral key.



- 2** Enter the pattern number that you want to delete.
(ex. pattern number...901)



- 3** Confirm the pattern number that you entered.

- When the pattern number is correct, push the 1 key. The pattern that you specified is deleted and the MAIN MENU will appear on the screen.
- When you want to change the pattern number, push the 2 key. The screen returns to ②.

When you want to delete all of the pattern that you created...

- At step ② enter 888 and push the STEP key.



All the patterns are deleted and MAIN MENU will appear on the screen.

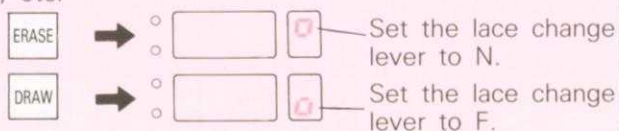
INPUT MEMO DATA (MAIN MENU 4)

- You can enter 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 data.
- Use the numeral keys 1–9 and the DRAW and ERASE keys to enter his information.

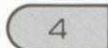
< INDICATION IN THE MEMO DISPLAY >
When you enter pattern knitting information using the keys 1–9.



When you enter the pattern knitting information using the DRAW and ERASE keys, you can use these to show which lace change lever setting to use, etc.



- 1 Select option 4 from MAIN MENU by entering 4 with the numeral key.



(KH-930)

* Pattern Programming Device *
- MAIN MENU -

1. CREATE NEW PATTERN
2. EDIT PATTERN
3. DELETE PATTERN
4. INPUT MEMO DATA
5. TRANSFER CREATED DATA
6. PRINT OUT PATTERN

* SELECT 1-6

- 2 The list of patterns that you created is displayed on the screen.

Using the cursor key (▲·▼), move the cursor "▶" to the pattern number in which you want to input the memo data.

- INPUT MEMO DATA -

PATTERN No.	STITCHES	ROWS
901	8	10
902	16	28
▶903	15	26
904	15	20
.	.	.
.	.	.

- 3 Push the STEP key, and then the pattern that you specified will appear on the screen.



- 4 Move the cursor to the row on which you want to input the memo data and input the memo data with the numeral key, DRAW key or ERASE key.

(ex. Input 2 on 5th row.)

① Move the cursor to the 5th row.

♣ It does not matter if the cursor is on any stitch.

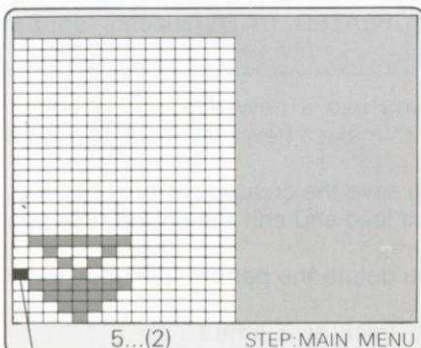
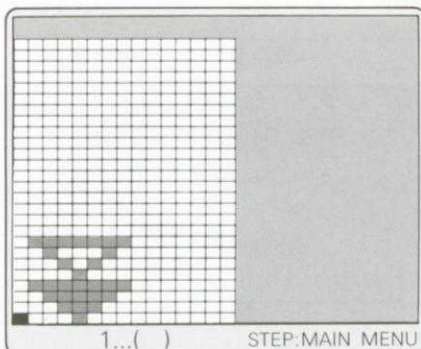
② Enter 2 with the numeral key.

♥ If you make a mistake, push the correct key to rewrite the data.

♥ If you clear the memo data, push the C key.

* Continue to input the memo data as you require.

- 5 When you finish to input memo data, push the STEP key. MAIN MENU appears on the screen.

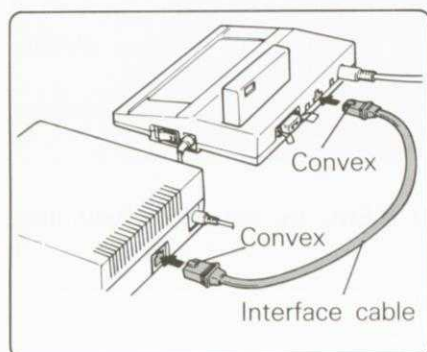


Cursor
Memo data
Row number

TRANSFER CREATED DATA (MAIN MENU 5)

- If you use the floppy disc drive unit (option), you can save the created patterns on the disc, or load the patterns from the disc to the pattern programming device.

*Please read the instruction manual of the floppy disc drive unit and also read the pages of "FLOPPY DISC DRIVE UNIT" of electronic knitting machine.



- Preparation of floppy disc drive unit

*The drive unit should be placed in front of the TV screen and not in the back of the TV screen for it to work normally.

- ① Turn off the power switch of pattern programming device and the floppy disc drive unit.
- ② Connect the pattern programming device and drive unit with the interface cable.
- ③ Turn on the power switch of the pattern programming device and drive unit.

* Pattern Programming Device *
- MAIN MENU -

1. CREATE NEW PATTERN
2. EDIT PATTERN
3. DELETE PATTERN
4. INPUT MEMO DATA
5. TRANSFER CREATED DATA
6. PRINT OUT PATTERN

* SELECT 1-6

1

Select option 5 from MAIN MENU by entering 5 with the numeral key.

5

CONNECT INTERFACE CABLE

TURN POWER ON!

PUSH STEP KEY!!

2

Confirm that the drive unit is connected to pattern programming device correctly and the power switch of the drive unit is turned on. Then, push the STEP key.

STEP

- TRANSFER CREATED DATA -

1. FORMAT DISC
2. SAVE CREATED DATA
3. LOAD CREATED DATA
4. DELETE CREATED DATA

* SELECT 1-4

3

The menu of TRANSFER CREATED DATA appears on the screen.

Choose this option when you use a new disk. Formatting is the procedure to make a new disk ready to accept your data.

Choose this option when you save the created pattern on a disc. Choose this option when you load and edit the pattern that you stored on a disc.

Choose this option when you delete the pattern that you stored on a disc.

(The pattern is deleted one track at a time.)

♥ If you want to return the screen to MAIN MENU, push the HELP key.

◆◆◆ FORMAT DISC ◆◆◆

- Before you can use a new disc to store pattern data from your pattern programming device and electronic knitting machine, you need to prepare the new disc to make it ready to accept your data.
 - ♣ This preparation process is called "formatting". You can use the disc that you format (and in which you stored the pattern) with electronic knitting machine when you use the pattern programming device.

REMARK: If you format a disc that has pattern data already on it, this data will be erased.

– TRANSFER CREATED DATA –

1. FORMAT DISC
 2. SAVE CREATED DATA
 3. LOAD CREATED DATA
 4. DELETE CREATED DATA
- * SELECT 1-4

1

Choose option 1 from the menu of TRANSFER CREATED DATA by entering 1 with the numeral key.

1

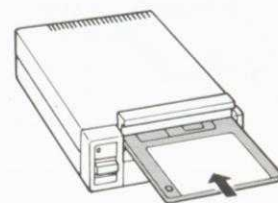
– TRANSFER CREATED DATA –

- * FORMAT DISC *
- INSERT DISC!
PUSH STEP KEY!!

2

Insert a disc into the drive unit and push the STEP key.

STEP



– TRANSFER CREATED DATA –

- * FORMAT DISC *
- NOW FORMATTING...

3

Formatting begins.

*It takes about 100 seconds for the drive unit to finish formatting.

4

When formatting is completed the screen returns to ①.

◆◆◆ SAVE CREATED DATA ◆◆◆

- You can save on a disc the pattern memorized by the pattern programming device.
- One track of a disc is used to save all the data in the pattern programming device.

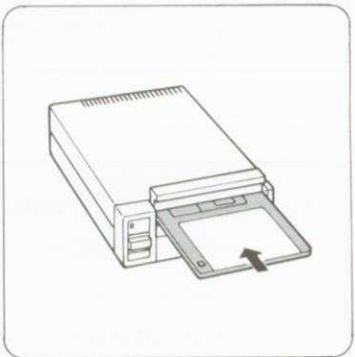
– TRANSFER CREATED DATA –
1. FORMAT DISC
2. SAVE CREATED DATA
3. LOAD CREATED DATA
4. DELETE CREATED DATA
* SELECT 1-4

1 Choose option 2 from the menu of TRANSFER CREATED DATA by entering 2 with the numeral key.



– TRANSFER CREATED DATA –
* SAVE CREATED DATA *
INSERT DISC!
PUSH STEP KEY!!

2 Insert a disc into the drive unit and push the STEP key.



– TRANSFER CREATED DATA –
* SAVE CREATED DATA *
SAVED TRACK No. = 1

3 The computer of the pattern programming device searches for the empty track and displays the track number. (Then storage begins.)

– TRANSFER CREATED DATA –
* SAVE CREATED DATA *
SAVED TRACK No. = 1
PUSH STEP KEY!!

4 When storage is finished, the display as shown at left appears. Confirm the track number. (Use this number yourself as a reference on your design sheet to avoid confusion.) Push the STEP key. The screen returns to ①.



◆◆◆ LOAD CREATED DATA ◆◆◆

- You can load the patterns which are saved on one track of a disc into the pattern programming device.
REMARK: When loading the pattern into the pattern programming device all the pattern data in the memory of the pattern programming device will be deleted. If you need those patterns, save them in the disc first.

– TRANSFER CREATED DATA –
1. FORMAT DISC
2. SAVE CREATED DATA
3. LOAD CREATED DATA
4. DELETE CREATED DATA
* SELECT 1–4

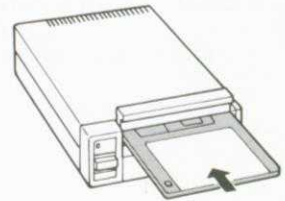
- 1** Choose option 3 from the menu of TRANSFER CREATED DATA by entering 3 with numeral key.

3

– TRANSFER CREATED DATA –
* LOAD CREATED DATA *
INSERT DISC!
PUSH STEP KEY!!

- 2** Insert the disc containing the data for the pattern you wish to load into the drive unit and push the STEP key.

STEP



– TRANSFER CREATED DATA –
* LOAD CREATED DATA *
INPUT TRACK No. = ■

- 3** Enter the track number which contains the pattern you want to load and push the STEP key.
(ex. track number ... 1)

1

STEP

Loading begins.

- 4** When loading is completed, the screen returns to ①.

When you want to display the pattern which you loaded into the pattern programming device, on the screen...

- ① Push the HELP key. MAIN MENU appears on the screen.
- ② Select option 2 from MAIN MENU and follow the steps on page 34.

◆◆◆ DELETE CREATED DATA ◆◆◆

- The saved pattern data stored on a disc can be deleted one track at a time.
- ♣ If you want to delete all the pattern data stored on a disc, then carry out the formatting procedure and this will erase all the data.

– TRANSFER CREATED DATA –
 1. FORMAT DISC
 2. SAVE CREATED DATA
 3. LOAD CREATED DATA
 4. DELETE CREATED DATA
 * SELECT 1–4

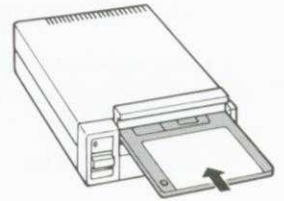
- 1** Choose option 4 from the menu of TRANSFER CREATED DATA by entering 4 with the numeral key.

4

– TRANSFER CREATED DATA –
 * DELETE CREATED DATA *
 INSERT DISC!
 PUSH STEP KEY!!

- 2** Insert the disc containing the data for the pattern you wish to delete into the drive unit and push the STEP key.

STEP



– TRANSFER CREATED DATA –
 * DELETE CREATED DATA *
 INPUT TRACK No. = ■

- 3** Enter the track number which you want to delete and push the STEP key.
 (ex. track number ... 1)

1

STEP

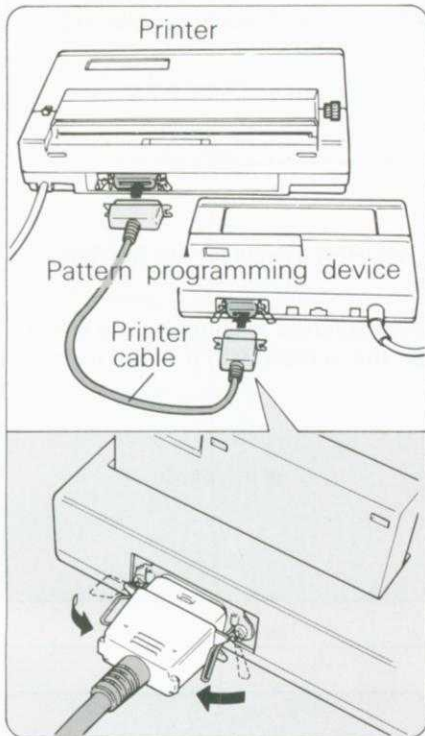
– TRANSFER CREATED DATA –
 * DELETE CREATED DATA *
 INPUT TRACK No. = 1
 OK? 1: YES 2: NO

- 4** Confirm the track number that you entered.
- When the track number is correct, push the 1 key. The pattern data of the track number that you specified is deleted.
 - When you want to change the track number, push the 2 key. The screen returns to ③.

- 5** When the deletion is finished, the screen returns to ①.

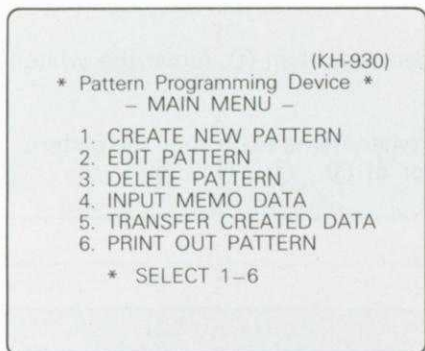
PRINT OUT PATTERN (MAIN MENU 6)

- You can print out the pattern with the optional printer.
It is recommendable use brother printer (Epson-compatible 9-pin dot matrix printer).
*Epson is a registered trade mark of Seiko Epson Corp.

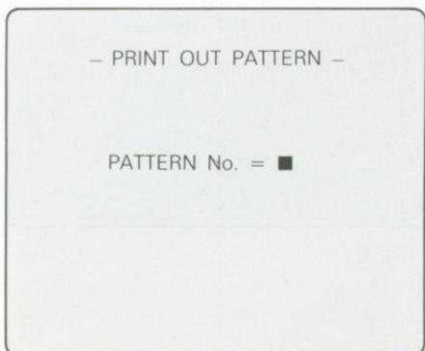


- Preparations for the printer
*Please read the instruction book accompanying with the printer before you use it.

- ① Turn off the power of the pattern programming device and the printer.
- ② Connect the printer to the pattern programming device with the printer cable.
- ③ Switch on the power of the pattern programming device and the printer.



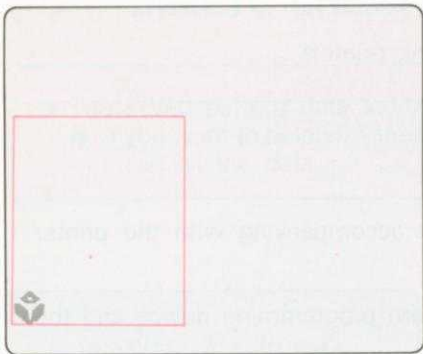
- ① Select option 6 from MAIN MENU by entering 6 with numeral key.



- ② Enter the pattern number that you want to print out and push the STEP key.

(ex. pattern number ...901)





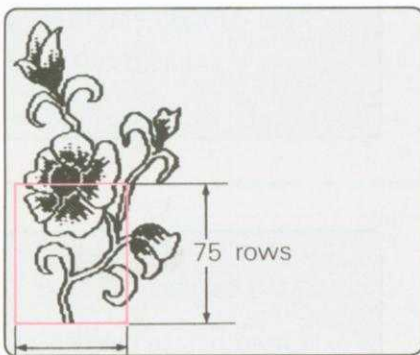
3 The pattern that you specified is displayed on the screen. The part of a white frame that is displayed on the screen will be printed out from now on.

♥ When you want to print out another part of the pattern that exceeds 50 stitches and/or 75 rows, move the white frame with the cursor key. (Refer to the following column.)

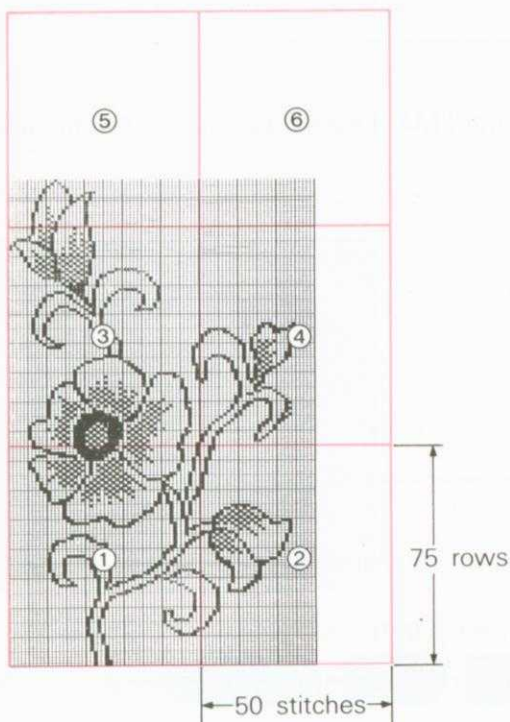
Push the STEP key.

STEP

♥ WHEN YOU WANT TO PRINT OUT A PATTERN THAT EXCEEDS 50 STITCHES AND/OR 75 ROWS



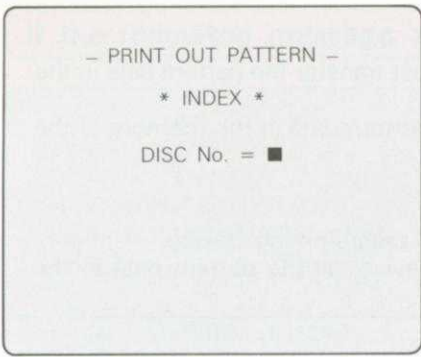
- You can print out the pattern up to 50 stitches × 75 rows on a sheet of paper and that area is shown on the screen with a white frame.



- In the case where the pattern exceeds 50 stitches and/or 75 rows, the pattern is divided into a few parts and printed out in the order as shown in the figure.

- When you want to print out other parts than ①, move the white frame with the cursor key.

* For example, you will move the white frame to ③, then the pattern will be printed out in the order of ③ · ④ · ⑤ · ⑥.

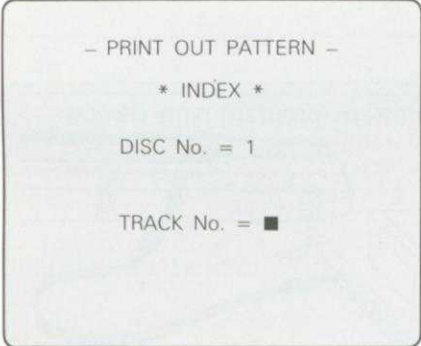


4 When you print out the pattern stored in the disc, enter the disc number as a reference, then the disc number will also be printed out.

(ex. disc number ... 1)



♥ If you do not need to print out the disc number, push the STEP key only.

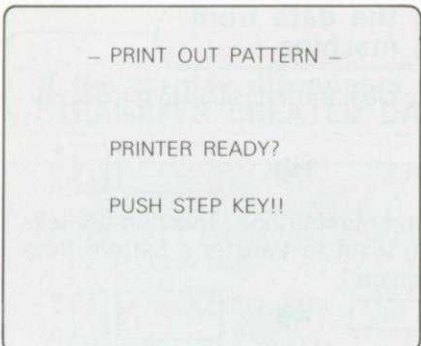


5 If you enter the track number as a reference, the track number will also be printed out.

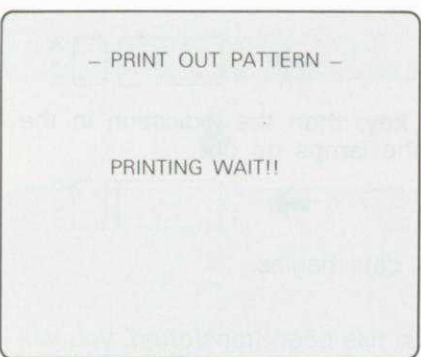
(ex. track number ... 1)



♥ If you do not need to print out the track number, push the STEP key only.



6 Insert a paper into the printer and push the online key. After confirming the online lamp is lit, push the STEP key.



7 Printing out begins.
♥ In the case where the pattern exceeds 50 stitches and/or 75 rows, the screen returns to **6** when the printer finishes printing out 1 paper, then repeat step **6**.

8 When the MAIN MENU appears on the screen, printing will soon be finished.

TRANSFER CREATED DATA FROM/TO KNITTING MACHINE

Transferring the data to the knitting machine

In order to knit the pattern created with the pattern programming device you must transfer the pattern data in the device to the knitting machine.

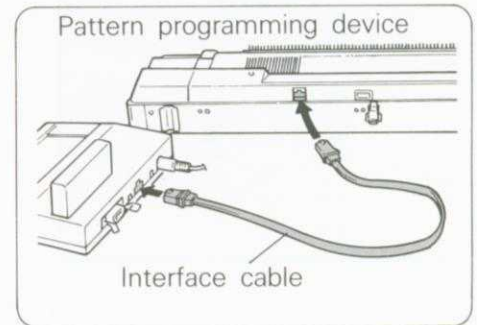
REMARK: When transferring the pattern data to the knitting machine, all the pattern data in the memory of the knitting machine will be deleted.

Transferring the data from the knitting machine

You can transfer all the pattern data in the knitting machine to the pattern programming device.

REMARK: When transferring the pattern data to the pattern programming device, all the pattern data in the memory of the device will be deleted.

- 1 Switch off the power of the pattern programming device and TV set.
- 2 Disconnect the pattern programming device from the TV set.
- 3 Switch off the power of the knitting machine. Connect the FB connector of the knitting machine to the KH/FB connector of the pattern programming device with the interface cable.
- 4 Switch on the power of the pattern programming device and the knitting machine (confirm that the ready lamp is lit).
- 5 Operating the necessary procedure on the panel of the knitting machine transfer the created pattern. (Do not operate the pattern programming device.)



Transferring the data to the knitting machine

- 1 Push the CE key to clear the indication in the display.



- 2 Enter the command number 551. This number tells the computer you want to transfer a pattern to your knitting machine.



- 3 Push the STEP key.



- 4 Enter the number 1.



- 5 Push the STEP key, then the indication in the display and all the lamps go out.



Transferring the data begins.

- 6 When the pattern has been transferred, you will hear the buzzer make the sound "Pi" and the indication and lamps are set.

♥ After pattern program, you can knit the pattern transferred to the knitting machine. (Pattern program: refer to the electronic knitting machine manual.)

Transferring the data from the knitting machine

- 1 Push the CE key to clear the indication in the display.



- 2 Enter the command number 552. This number tells the computer you want to transfer a pattern from your knitting machine.



- 3 Push the STEP key. Number 1 is indicated on the display and ready lamp and pattern number lamp are lit.



- 4 Push the STEP key, then the indication in the display and all the lamps go out.



Transferring the data begins.

- 5 When the pattern has been transferred, you will hear the buzzer make the sound "Pi" and all the indication and lamps are as they are before you pushed the CE key.

♥ When you want to see the pattern transferred to the pattern programming device on the TV screen, work the option "EDIT PATTERN" (Refer to page 34).

♥ If the knitting machine does not work normally while transferring the data, turn off the power switch of the knitting machine and pattern programming device, and then start from the beginning.

IN THE FOLLOWING CASES

If the following message appears on the screen...

CAUTION!
MODE SWITCH IS CHANGED.
ALL THE PATTERN WILL BE CLEARED
AND MODEL WILL BE CHANGED.
OK? STEP:YES HELP:NO

Cause

KH mode switch has been changed.

Suggested action

- When the KH mode switch is not set correctly to your model, change the KH mode switch correctly and push the HELP key.
- When the KH mode switch is set correctly to your model, push the STEP key.
All the created pattern in the pattern programming device will be cleared.

*** ERROR MESSAGE ***
DISC TYPE IS WRONG!!
PUSH STEP KEY!!

Cause

Disc type is determined by which KH mode switch setting is used when you transferred the pattern from the pattern programming device to the disc. This screen indicates that the disc type is not corresponding with the KH mode switch setting.

Suggested action

Set the corresponding disc and push the STEP key.

If the display disappears from the screen when you select the option "TRANSFER CREATED DATA"...

- TRANSFER CREATED DATA -
1. FORMAT DISC
2. SAVE CREATED DATA
3. LOAD CREATED DATA
4. DELETE CREATED DATA
* SELECT 1-4



[Empty screen area]

Cause

Power switch of the floppy disc drive unit is not turned on, or the drive unit is not connected to pattern programming device.

Suggested action

- ① Turn off the power switch of the pattern programming device and floppy disc drive unit.
- ② Confirm that the pattern programming device and the drive unit are connected with interface cable securely.
- ③ Turn on the power switch of the pattern programming device and the drive unit.
- ④ Start all over again.

When the printer does not work and the following message appears on the screen...

- PRINT OUT PATTERN -

PRINTING WAIT!!

Cause Printer is not ready to working.

Suggested action
Turn on the online lamp of the printer.

- PRINT OUT PATTERN -

PRINTER READY?
PUSH STEP KEY!!

Cause Power switch of the printer is not turned on or the printer is not connected to the pattern programming device.

Suggested action

- ① Turn off the power switch of the pattern programming device and the printer.
- ② Confirm that the pattern programming device and the printer are connected correctly.
- ③ Switch on the power of the pattern programming device and the printer.

(KH-930)
* Pattern Programming Device *
- MAIN MENU -
1. CREATE NEW PATTERN
2. EDIT PATTERN
3. DELETE PATTERN
4. INPUT MEMO DATA
5. TRANSFER CREATED DATA
6. PRINT OUT PATTERN
* SELECT 1-6

If the pattern is not printed out normally...

Cause DIP switch of the printer is not set correctly.

Suggested action
Set the DIP switch to the condition of "as delivered" referring to the instruction manual of the printer.

If the pattern on the screen is disturbed or indicates that something is wrong or any key does not function...

Cause The pattern data in the pattern programming device is broken. (It may happen when you insert or pull out the program cartridge while the power switch of the pattern programming device is on, or you touch the connectors.)

Suggested action
Delete the broken pattern data.

- ① Turn off the power switch of the pattern programming device, and then switch on the power.
- ② Select the option 3 from the MAIN MENU. Enter "888" and push the STEP key.
- ③ Start all over again.

※ If more than 5 years have passed since you purchased the pattern programming device, battery energy may be used up, therefore please ask dealer's advice.

DIAGRAM OF CHARACTERS

