

**SINGER**

1669U

**SINGER®**

**INSTRUCTION MANUAL**  
**for**  
**Making Sewing Patterns**

**1669U MACHINE**

# CONTENTS

	Page
1. Preparation .....	2
2. Execution of Program .....	3
3. How to Prepare Patterns .....	4
1. To Prepare a Pattern Formed with Straight Lines .....	7
2. To Make a Circle .....	9
3. To Make an Arc .....	10
4. To Make Free Curved Line .....	11
5. To Set Zigzag Stitch .....	12
6. To Clear Zigzag Stitch .....	15
7. Setting of thread trimming while sewing .....	16
8. To Set Fabric Feed .....	17
9. To Clear Fabric Feed .....	17
10. To Change Stitch Length .....	18
11. To Change Max. Sewing Speed .....	19
12. Mirror Image .....	20
13. Monogramming .....	21
14. To End Pattern Preparation .....	22
4. To Modify Pattern .....	23
5. To Enlarge or Reduce Pattern Size .....	31
6. To Move Pattern .....	32
7. To Select Pattern .....	33
8. Options .....	35
9. Description of Tablet .....	36
1. Specification of Tablet .....	36
2. Button Cursor .....	36
3. Function Switches .....	37
10. Sewing Data .....	38
11. How to Write Sewing Data into "EEPROM" .....	39

# 1. Preparation

## 1) Specification for personal computer

Machine	IBM PC/AT compatible personal computer
CPU	486DX2 - 33MHz or more (Pentium-60MHz or more is recommended)
Memory	8 MB or more.
Floppy disk	3.5 inch, 2HD/1.44MB disk drive 1 unit or more
Hard disk	5 MB or more (3 MB required for program software)
CRT	640 X 480 dot, 16 colors or more
OS	MS-DOS 5.0 or more

- 2) Start up the personal computer in "MS-DOS" mode.  
(With regard to the startup meethod, refer to the service manual furnished with the personal computer.)
- 3) Copy all system disks (1 and 2) to hard disks.  
Example: When copying from drive A to hard disk drive C, type as shown below and press < ENTER > key.  
**copy a:\*. \* c:**

- 4) Check to determine whether the programs listed below have been copied.

**SIN1669.bat**  
**bold.chr**  
**egavag.bgi**  
**trip.chr**  
**569\_file.dt**  
**569com.exe**  
**569edit.exe**  
**569file.exe**  
**569mdf.exe**  
**569open.exe**  
**569ptm.exe**  
**569scl.exe**  
**569ptsel.exe**  
**sin\_hex.exe**

Example: When copying to hard disk drive C, type as shown below and press < ENTER > key.

**dir c:**

## 2. Execution of Program

### 1. Preparation

- (1) Make sure that personal computer is connected to tablet with RS232C cable.  
(Use serial connector No.1 on the personal computer side.)
- (2) Switch the personal computer "ON" and then start up the personal computer in "MS-DOS" mode.

Input the following to personal computer.

(Example: When program has been copied to hard disk drive "D".)

Type "D" and press <ENTER> key.

The display indicates the following.

Type as shown below and press <ENTER> key.

**SIN1669**

The program is put into execution.

- \* By pressing any key during the opening display, the display can be returned to the menu display.

### 2. Menu

When a tablet is used, switch the tablet 'ON' after the menu display has appeared. Select the desired item with cursor key and press < ENTER> key.

The program for the item selected is put into execution. The following items are contained in the menu.

**PATTERN MAKE**  
**PATTERN MODIFY**  
**PATTERN COMBINATION**  
**PATTERN SCALE**  
**PATTERN SELECTION**  
**OPTIONS**

- \* In case this system is used for the first time, be sure to select "OPTIONS" and put this into execution in order to determine where pattern data is loaded and saved. (See Page 35 "OPTIONS")
- \* In case no data is input within a given period of time, "Display Screen Protection Program" appears on the display. This display changes to the menu display when any key is depressed.

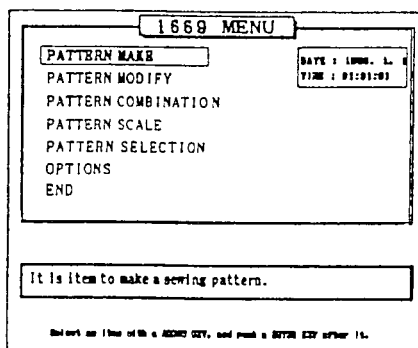


Fig.1 Menu Display Screen

### 3. How to Make Patterns

Keys to be Used:

- <Enter> Key: To input points
- <Delete> Key: To delete data incorrectly input
- <Arrow> Key: To move arrow pointer
- <Number> Key: To input values
- <Back Space> Key: To delete values incorrectly input

List of Function Keys by Function in Pattern Mode:

The following functions can be selected by pressing the appropriate function key while making pattern.

- F1 key: CIR, ARC  
To make a circle or an arc. (See items 3-2 and 3-3)
- F2 key: SPLINE  
To make a free curved line (See item 3-4)
- F3 key: Z/Z, CLR-Z/Z  
To set or clear zigzag stitching (See items 3-5 and 3-6)
- F4 key: TRIM  
To set thread trimming (See item 3-7)
- F5 key: FEED  
To set or clear fabric feed (See items 3-8 and 3-9)
- F6 key: STI-LENG  
To change stitch length (See 3-10)
- F7 key: MAX-SPEED  
To change max. sewing speed (See item 3-11)
- F8 key: OPTION
- F9 key: OPTION
- F10 key: Change Menu  
To change menu item

When <F10> key is selected, the functions of keys will be changed as follows.

F1 key:	OPTION
F2 key:	OPTION
F3 key:	OPTION
F4 key:	OPTION
F5 key:	MIRROR Mirror image of pattern ( See item 3-12)
F6 key:	MONOGRAM Monogramming (See item 3-13)
F7 key:	CHANGE DEVICE Change of pattern input device
F8 key:	MDF END Completion of pattern modification
F9 key:	END Completion of preparation of pattern (See item 3-14)
F10key:	Change Menu Change of menu items

### Example of How to Prepare a Square Pattern

- 1) Select "PATTERN MAKE" on the menu and press < ENTER> key.
- 2) Display shows the following.

**INPUT DEVICE SELECT**

**F1 : TABLET**

**F2 : CURSOR**

**PUSH THE <F1> OR <F2> KEY.**

- 3) Press either < F1> or < F2> key to select input device.

When < F1> key is pressed, tablet is selected as an input device.

When <F2 > key is presses, input by cursor keys is selected.

In case tablet is selected, input the original point of stitch pattern of a masterpattern drawing by using button cursor on the tablet. Also, stitch pattern should be written on a master pattern drawing in a scale of 5 times. (See Fig.2)

- 4) The display indicates the following.

**INPUT PATTERN NAME**

**(MAXIMUM LENGTH OF FILE NAME IS 8 CHARACTERS.)**

- 5) Input the name of stitch pattern with < ENTER> key. (Example: When the stitch pattern is named '1669U')

**INPUT PATTERN NAME**

**(MAXIMUM LENGTH OF FILE NAME IS 8 CHARACTERS.)**

**1669U\_<ENTER>**

- \* Max. number of characters for a pattern name that can be input is 8 characters.

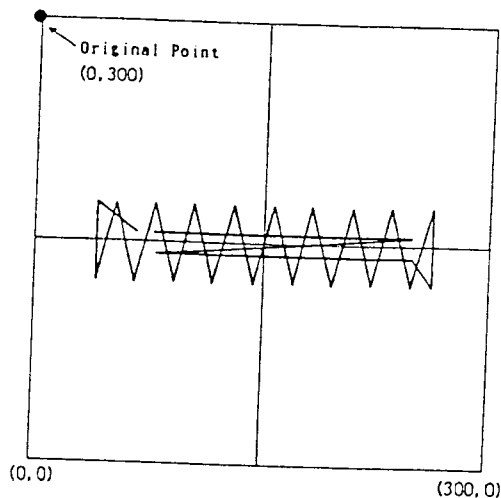


Fig.2 Original Point of Stitch Pattern



- To Prepare a Pattern Formed with Straight Lines  
Make a pattern in the manner described below. (See Fig. 3)

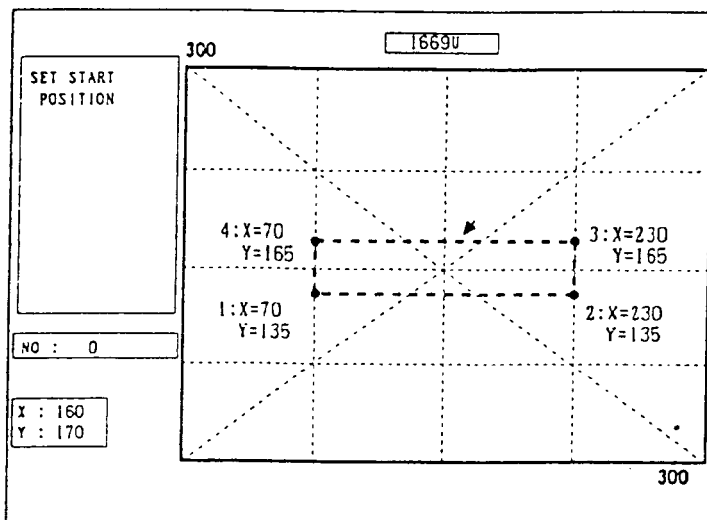


Fig.3 Pattern Input Display Screen

- Pattern input display screen appears with the following message.

**SET START  
POSITION**

- Input the start point of sewing the pattern. (When data is input with keys, refer to the instructions given under the heading of **"Keys to be Used"**. (See Page 4))

Move pointer to (X=70, Y=135) and input the desired points.

- The following message appears on the display.

**STLENG**

= 100\_

- By using <Back Space> key, delete the value shown, input stitch length and then press <ENTER> key.

(Example: When stitch length is set for 3mm)

**STLENG**

= 30\_<ENTER>

- \* Stitch length between 0.2 and 10mm can be input.  
When input stitch by stitch, input as **STLENG = 100**.  
In case the distance between 2 points exceeds 100 (10 mm), point or points will be added automatically.

- 5) Move pointer to (X=230, Y=135) and input the desired points.
- 6) Move pointer to (X=230, Y=165) and input the desired points.
- 7) Move pointer to (X=70, Y=165) and input the desired points.
- 8) Move pointer to (X=70, Y=135) and input the desired points.
- 9) End pattern preparation by making reference to the procedures described under the heading "To End Pattern Preparation" on Page 22.

2. To Make a Circle

Make a pattern in the manner described below. (Example: See Fig. 4)

1) Press < F1 > key.

2) The following message appears on the display.

**F1:CIRCLE**

**F2:ARC**

3) Press < F1 > key.

4) The following message appears on the display.

**CIRCLE**

**PUSH**

**<F1> OR <F2>KEY.**

**F1:YES F2:NO**

Press < F1 > key.

(To discontinue the making of a circle, press < F2 > key.)

5) The display indicates the following.

**Input CIR**

**1ST Point**

6) Input point B. (Example: See Fig.4-1)

7) The display indicates the following.

**Input CIR**

**2ND Point**

8) Input point C. (Example: See Fig.4-2)

9) The display indicates the following.

**WHAT A MOMENT**

Make a circle which passes through points A, B and C.(Example: See Fig.4-3)

\* When point A and C cannot be connected to form a circle (due to the location of points being on a straight line, etc.), an error message appears on the display.

In this case, correct the location of points and input data again.

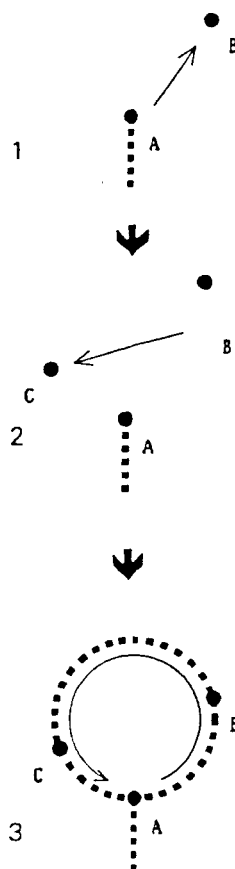


Fig. 4 Making of Circle

#### 4. To Make a Free Curved Line

Follow the steps described below when making a free curved line. (Example: See Fig.6)

- 1) Press < F2 > key.
- 2) The display indicates the following.

**SPLINE**  
**PUSH**  
**<F1> OR <F2>KEY.**  
**F1:YES F2:NO**

Press < F1 > key.

(To discontinue the making of free curved line, press < F2 > key.)

- 3) The display indicates the following.

**IN OVER 3**  
**SPL\_POINT**

- 4) Input points B to D in sequence. (Example: See Fig. 6-1, 2 and 3)

- 5) Press F10 key.

- 6) The display shows the following.

**WHAT A MOMENT**

Make a free curved line. (See Fig. 6-4)

- \* The more points input, the smoother curved line formed. Free curved line cannot be made unless 3 points or more are input.

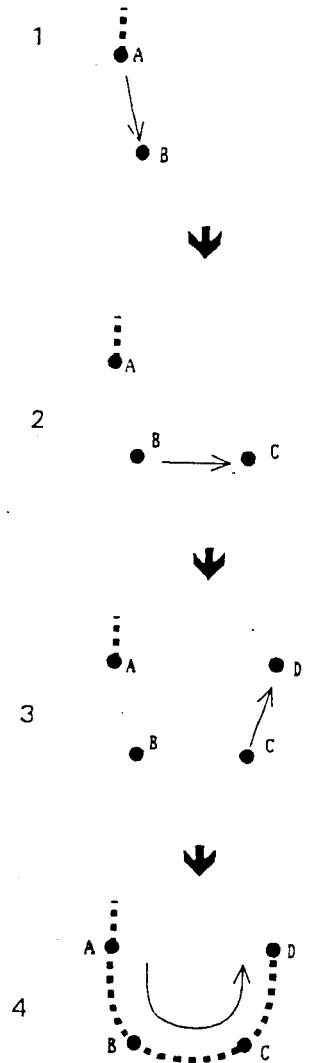


Fig. 6 Making of Free Curved Line

5. To Set Zigzag Stitching

Follow the steps described below when setting zigzag stitching. (Example: See Fig. 1)

- 1) Press < F3 > key.
- 2) The display indicates the following.

**F1:ZIG ZAG**  
**F2:CLR\_ZIG ZAG**

- 3) Press < F1 > key.
- 4) The display indicates the following.

**ZIG ZAG**  
**PUSH**  
**<F1> OR <F2>KEY.**  
**F1:YES F2:NO**

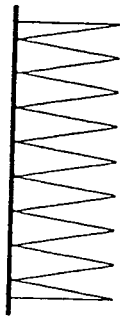
Press < F1 > key.

(To discontinue setting of zigzag stitching, press < F2 > key.)

- 5) The display indicates the following.

**Select**  
**Z/Z base line**  
**F1:'L' F2:'C' F3:'R'**  
**PUSH <F1>, <F2>**  
**OR <F3>KEY.**

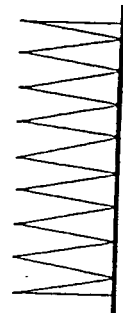
Set needle position to the left or center or right by pressing < F1 > or < F2 > or < F3 > key.



Left Needle Position



Center Needle Position



Right Needle Position

- 6) The display indicates the following.  
**ZIG ZAG**  
**WIDTH=50\_**
- 7) Input zigzag stitch width and press < ENTER > key. (Example: When zigzag stitch width is set for 4mm)  
**ZIG ZAG**  
**WIDTH=40\_<ENTER>**
- 8) The display indicates the following.  
**ZIG ZAG**  
**STITCH=1\_**
- 9) Input the number of zigzag stitches and press < ENTER > key.  
(Example: When the number of zigzag stitches is 2)  
**ZIG ZAG**  
**STITCH=2\_<ENTER>**
- 10) The display indicates the following.  
**ZIG ZAG**  
**PITCH=10\_**
- 11) Input the number of zigzag pitches and press < ENTER > key.  
(Example: When the number of zigzag stitches is 0.5mm)  
**ZIG ZAG**  
**PITCH=5\_<ENTER>**
- 12) Input the end point of zigzag stitching. (Example: See Fig.7)
- \* Once zigzag stitching is set, sewing of circle or arc or free curved line will become zigzag stitching.

6. To Clear Zigzag Stitching

Follow the steps described below when clearing zigzag stitching.

1) Press < F3> key.

2) The display indicates the following.

**F1:ZIG ZAG**

**F2:CIR\_ZIG ZIG**

3) Press < F2> key.

4) The following message appears on the display.

**CIR Z/Z**

**PUSH**

**<F1> OR <F2>KEY.**

**F1:YES F2:NO**

Press < F1> key.

(To discontinue clearing of zigzag stitching, press < F2> key.)

7. Setting of thread trimming while sewing

Trimming position must be set in the manner described below.

(Example: See Fig.8)

- 1) Press < F4 > key. The following message appears on the display.

**TRIM**

**PUSH**

**<F1> OR <F2>KEY.**

**F1:YES F2:NO**

Press < F1 > key. (To discontinue setting of trimming position, press < F2 > key.)

Trimming position was set at point A. (Example: See Fig. 8-2)

- 2) Input the next point. (Example: See Fig. 8-3)

- \* Other functions cannot be used unless sewing start point B after trimming is input. Only presser foot moves without sewing up to the next point of trimming data.

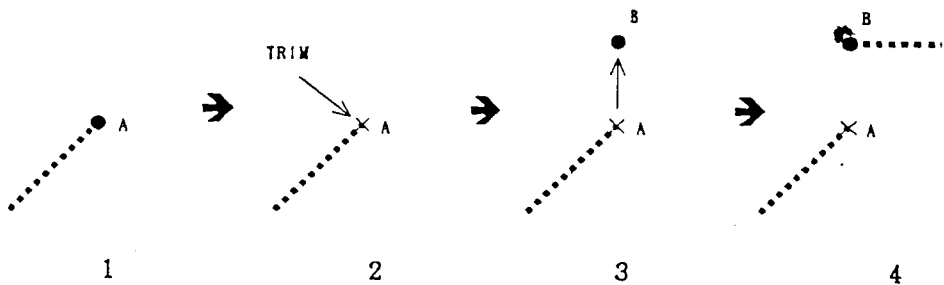


Fig. 8 Thread Trimming



8. To Set Fabric Feed (feeding of work piece without sewing)  
Follow the steps described below when setting fabric feed.  
(Example: See Fig. 10)

- 1) Press < F5> key.
- 2) The following message appears on the display.

**FEED  
PUSH  
<F1> OR <F2>KEY.  
F1:YES F2:NO**

Press < F1> key.

(To discontinue setting of fabric feed, press < F2> key.)

- 3) Fabric feed takes place from point A. (Example: See Fig. 10-1.)

- \* During fabric feed, the system cannot be set for zigzag stitching, trimming, temporary stoppage and end of operation.

Fabric feed starts after thread trimming at setting position A of fabric feed.

9. To Clear Fabric Feed

The method used to clear fabric feed is as mentioned below.

- 1) Press < F10> key and then < F9> key to select "END".  
Fabric feed is cleared. (Example: See Fig. 10-3)

Sewing starts from point C. (Example: See Fig. 10-4)

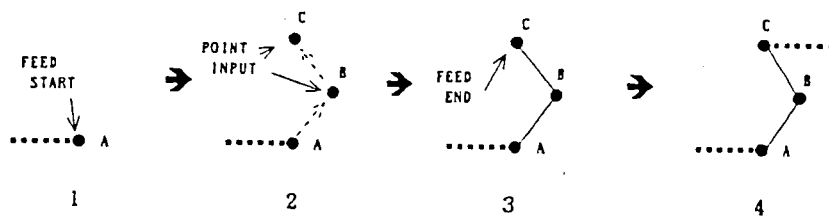


Fig. 10 Fabric Feed

10. To Change Stitch Length

The procedures in changing stitch length are as described below.

- 1) Press < F6> key.
- 2) The following message appears on the display.

```
STLENG IN
PUSH
<F1> OR <F2>KEY.
F1:YES   F2:NO
```

Press < F1> key.

(To discontinue changing of stitch length, press < F2> key.)

- 3) The display indicates the following.

```
STLENG
=      100_
```

- \* The value shown at this point represents STLENG up to now.

- 4) Input stitch length and press < ENTER> key.  
(Example: When stitch length is set for 3mm.)

```
STLENG
=      30_<ENTER>
```

- \* Stitch length between 0.2 to 10mm can be input. When stitch length is input stitch by stitch, input as STLENG =100.

Stitch length is changed.

11. To Change Max. Sewing Speed

Follow the steps described below when changing max. sewing speed.

1) Press < F7> key.

2) The following message appears on the display.

```
MAX_SPEED
PUSH
<F1> OR <F2>KEY.
F1:YES   F2:NO
```

Press < F1> key.

(To discontinue changing of max. sewing speed, press < F2> key.)

3) The display indicates the following.

```
MAX_SPEED
=          2700_
```

\* The value shown at this point represents max. sewing speed up to now.

4) Input max. sewing speed and press < ENTER> key.

(Example: When max. sewing speed is set at 1200rpm.)

```
MAX_SPEED
=          1200_<ENTER>
```

\* Since figures of first and second place become invalid, input values in increments of 100 rpm.

The max. sewing speed between 200 and 2700 rpm can be input.

Max. sewing speed is changed.

## 12. Mirror Image

Mirror image is produced in the manner described below.

- 1) Press < F10> key.
- 2) Press < F5> key.
- 3) The following message appears on the display,

**MIRROR  
PUSH  
<F1> OR <F2>KEY.  
F1:YES F2:NO**

Press < F1> key.

(To discontinuing mirror image, press < F2> key.)

- 4) The display shows the following.

**F1:X DIRECTION  
F2:Y DIRECTION  
F3:XY DIRECTION**

- 5) When < F1> key is pressed, mirror image is produced with X-axis as a base.  
When < F2> key is pressed, mirror image is produced with Y-axis as a base.  
When < F3> key is pressed, mirror image is produced with XY-axis as a base.  
Press < F1> or < F2> or < F3> key as desired.

Mirror image is produced.

### 13. Monogramming

Monogram pattern can be sew in the manner described below.

- 1) Press < F10 > key.
- 2) Press < F6 > key.
- 3) The following message appears on the display,

**MONOGRAM**

**PUSH**

1

**<F1> OR <F2>KEY.**

**F1:YES F2:NO**

Press < F1 > key.

(To discontinue setting of monogram sewing, press

< F2 > key.)

- 4) The display indicates the following.

**INPUT MONO**

**1ST LINE**

2

**f10:END 1ST LINE**

Input points that form a line (1) in sequence. (See Fig. 11-2)

- 5) After inputting points that form a line (1) , press < ENTER > key.

- 6) The display indicates the following.

**INPUT MONO**

**2ND LINE**

3

**f10:END 2ND LINE**

Input points that form a line 2 in sequence.  
(See Fig. 11-3)

- 7) After inputting points that form line 2, press < F10 > key.

X-axis/ Y-axis are automatically set and monogram pattern is sewn.

- 8) The display indicates the following and data for monogramming is prepared.

(Example: When X-axis is used as a base.)

**X DIRECTION**

**PUSH**

**<F1> OR <F2>KEY.**

**F1:YES F2:NO**

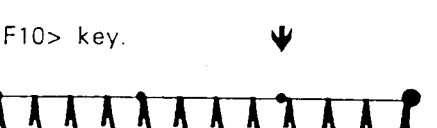
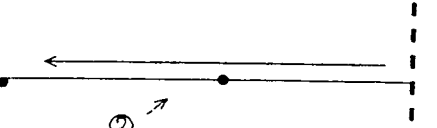
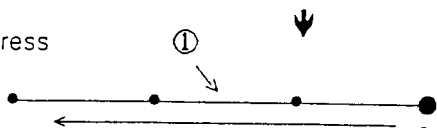
If the data is satisfactory, press < F1 > key.

To change X-axis/Y-axis, press < F2 > key.

Monogram pattern is made.

Fig. 11 Monogramming

- \* Feeding pitch for monogramming is determined by STLENG value. Consequently, sew monogram pattern after changing STLENG value.



#### 14. To End Making of Pattern

When ending the making of pattern, go through the procedures described below.

- 1) Press < F10> key.
- 2) Press < F9> key.
- 3) The display indicates the following,

**F1:END**

**F2:QUIT**

- 4) Press < F1> key.

Thread trimming mode will be input in pattern data automatically.

- 5) The display indicates the following.

**Select Pattern type**

**F1:Horizontal tarck**

**F2:Vertical tarck**

**F3:Embroidery**

**PUSH**

**<F1> , <F2>or<F3>**

**KEY.**

Input the type of pattern.

Press < F1> key for horizontal tack.

Press < F2> key for vertical tack.

Press < F3> key for embroidery.

Press <F1> or < F2> or < F3> key as desired.

- 6) The display indicates the following.

**SAVE SEWING PATTERN DATA**

**INPUT PATTERN NAME**

**(MAXIMUM LENGTH OF FILE NAME IS 8 CHARACTERS.)**

**1669u\_**

- 7) Input the name of pattern and press < ENTER> key.

When pattern is not to be stored, press < ESC> key.

\* Max. number of characters that can be input as the name of pattern is 8 characters.

- 8) To write pattern data into "EEPROM", execute the instructions given under the heading "To select Pattern" (Page 33).

## 4. How to Modify Pattern (Example: See Fig. 12)

1) Select "PATTERN MODIFY" on the menu display and press < ENTER> key.

2) The display indicates the following.

**INPUT DEVICE SELECT**  
**F1:TABLET**  
**F2:CURSOR**  
**PUSH THE <F1> OR<F2>KEY.**

3) Press either < F1> or < F2> key to decide input device.

When a tablet is selected, input the original point of pattern of a master pattern drawing with button cursor on the tablet.

4) Select the name of pattern you desire to modify with cursor key.

5) Display changes to 'Pattern Modify Display Screen' with the following message appearing on the display.

**START**  
**f1:NO MODIFY**  
**f2:MODIFY**  
**f3:MODIFY ALL END**

6) When < F1> key is pressed, the arrow pointer moves to the next data without modifying the data pointed by the arrow pointer.

When < F2> key is pressed, the data pointed by arrow pointer is modified.

When < F3> key is pressed, the modification program is finished without modifying the data subsequent to the one pointed by arrow pointer.

7) When modification is selected by pressing < F2> key, the following message appears on the display.

**F1:INSERT**  
**F2:DELETE**

8) When < F1> key is pressed, a new data point C will be additionally inserted between point A and point B.

When < F2> key is pressed, point B will be deleted and a new data point C will be additionally inserted.

Further, the following message appears on the display.

**F1:Use +/- KEY**  
**F2:Use ARROW KEY**

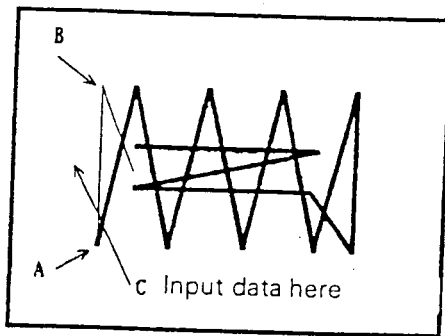
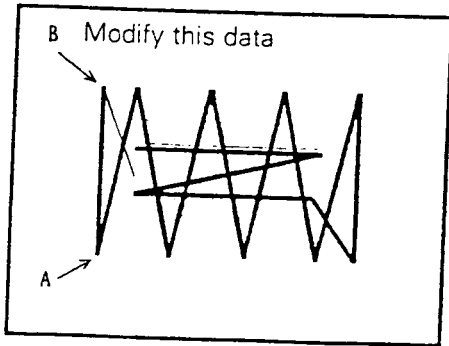
**PUSH**  
**<F1> OR<F2>KEY.**

When < F1> key is pressed, previously input data points will be used for data input.

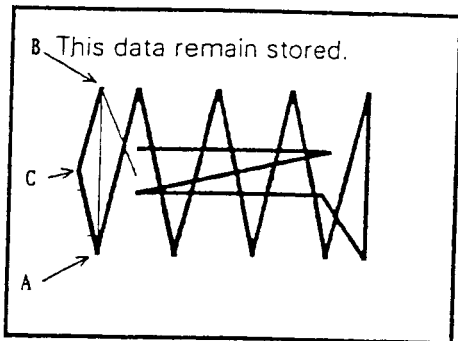
When < F2> key is pressed, arrow keys or input pointer on the tablet will be used.

The method of data input is the same as in the case of making pattern.

After completing data input, press < F10> key and thereafter, select 'MDF END' with < F8> key.



In the case of INSERT



In the case of DELETE

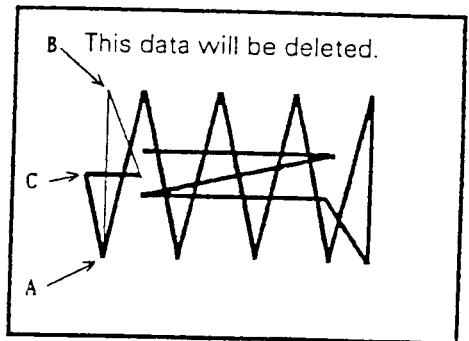


Fig12: How to Modify Pattern



### (Example 1) Delete point B. (DELETE)

- 1) Press < F1> key to move the arrow pointer to point B. (See Fig. 13-1)
- 2) When arrow pointer has reached point B, select 'MODIFY' by pressing < F2> key.

The following message appears on the display.

**F1:INSERT**

**F2:DELETE**

- 3) Press < F2> key.

The following message appears on the display.

**F1:Use +/- KEY**

**F2:Use ARROW KEY**

**PUSH**

**<F1> OR<F2>KEY.**

Press < F2> key.

Point B will be deleted and the arrow pointer will be moved to point A.

(See Fig. 13-2)

- 4) Press < F10> key to select 'Change Menu'.
- 5) Press < F8> key to select 'MDF END'. Modification of point B is completed. The arrow mark moves to the position of point C. (See Fig. 13-3).
- 6) Press < F3> key.  
The arrow pointer moves up to the end of pattern according to the pattern data. (See Fig. 13-4)
- 7) End pattern preparation by making reference to the procedures described under the heading "To End Pattern Preparation" on Page 22.

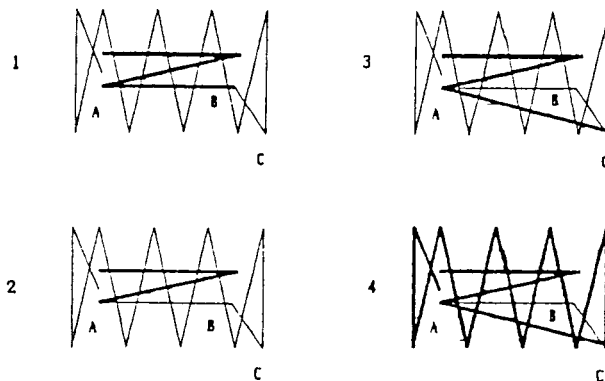


Fig. 13: Example 1

**(Example 2) To delete data after point B (DELETE)**

1) Press < F1 > key and move arrow pointer to point C. (See Fig. 14-1)

2) When arrow pointer has reached point 3, press < F2 > key.

The following message appears on the display.

**F1:INSERT**

**F2:DELETE**

3) Press < F2 > key.

The following message appears on the display.

**F1:Use +/- KEY**

**F2:Use ARROW KEY**

**PUSH**

**<F1> OR<F2>KEY.**

Press < F2 > key.

Point C is deleted and arrow pointer moves to point B. (See Fig. 14-2)

4) Select "Change Menu" by pressing < F10 > key.

5) Select "END" by pressing < F9 > key. The following message appears on the display.

**F1:END**

**F2:QUIT**

6) Press < F1 > key.

7) End pattern preparation by making reference to the procedures described under the heading "To End Pattern Preparation" on Page 22.

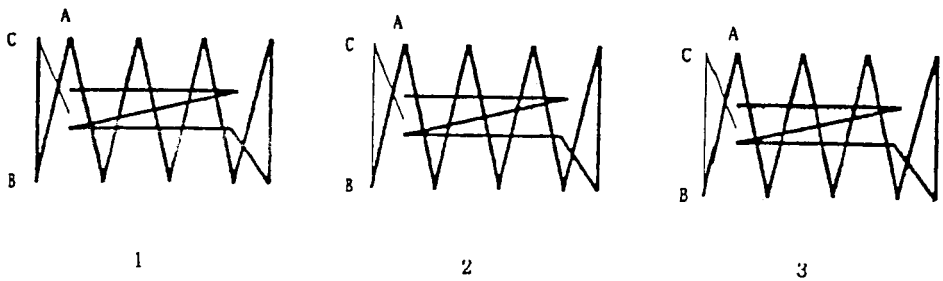


Fig. 14: Example 2

### (Example 3) To Delete and Revise Point B

- 1) Move arrow pointer to point B by pressing < F1 > key.
- 2) When arrow pointer has reached point B, press < F2 > key.

The following message appears on the display.

**F1:INSERT**  
**F2:DELETE**

- 3) Press < F2 > key.

The following message appears on the display.

**F1:Use +/- KEY**  
**F2:Use ARROW KEY**  
**PUSH**  
**<F1> OR<F2>KEY.**

Press < F2 > key.

Point B is deleted and arrow pointer moves to point A. (See Fig. 15-2)

- 4) Input point as point D.

Point D is input between point A and C. (See Fig. 15-3)

- 5) Press < F10 > key to select item "Change Menu".
- 6) Press < F8 > key to select item "MDF END". Revision of point B is completed.

Arrow pointer moves to point C. (See Fig. 15-4)

- 7) Press < F3 > key.

Arrow pointer moves to the end of pattern according to the pattern data.  
(See Fig. 15-5)

- 8) End pattern preparation by making reference to the procedures described under the heading "To End Pattern Preparation" on Page 22.

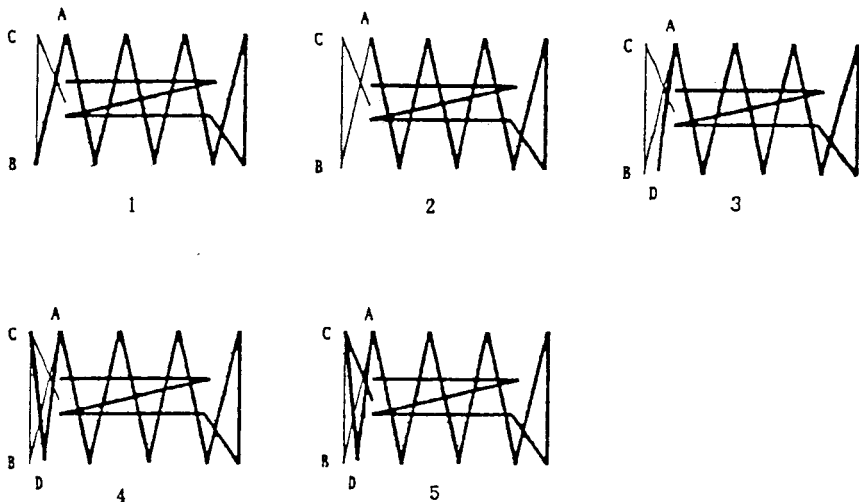


Fig. 15: Example 3

**(Example 4) To Input Point C between Point A and B (INSERT)**

1) Move arrow pointer to point B by pressing < F1 > key. (See Fig. 16-1)

2) When arrow pointer has reached point B, press < F2 > key.

The following message appears on the display.

**F1:INSERT**

**F2:DELETE**

3) Press < F1 > key.

Arrow pointer moves to point A. (See Fig. 16-2)

4) Input point C.

Point C is input between point A and B. (See Fig. 16-3)

5) Press < F10 > key to select "Change Menu"

6) Press < F 8 > key to select "MDF END". Revision of point between point A and B is completed.

Arrow pointer moves to point B. (See Fig. 16-4)

7) Press < F3 > key.

Arrow pointer moves to the end of pattern according to the pattern data.(See Fig. 16-5)

8) End pattern preparation by making reference to the procedures described under the heading "To End Pattern Preparation" on Page 22.

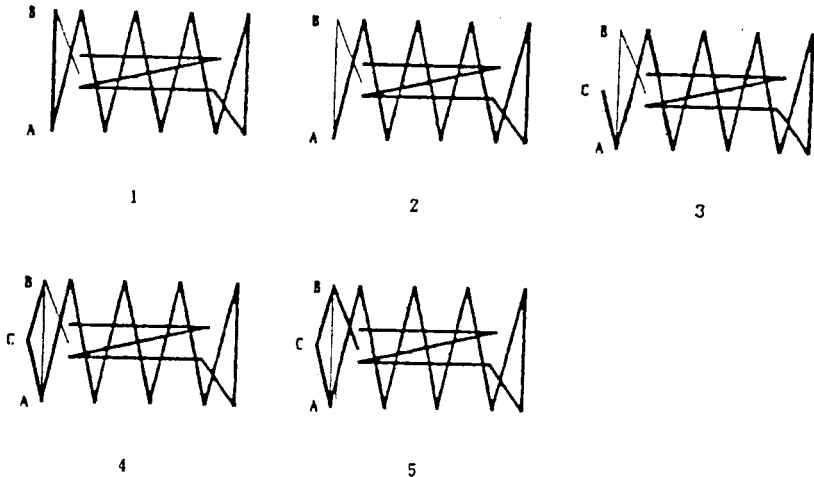


Fig. 16: Example 4

### (Example 5) To Change Max. Sewing Speed after Point A (INSERT)

1) Move arrow pointer to point B by pressing < F1 > key. (See Fig. 17-1)

2) When arrow pointer has reached point B, press < F2 > key.

The following message appears on the display.

**F1:INSERT**

**F2:DELETE**

3) Press < F1 > key.

Arrow pointer moves to point A. (See Fig. 17-2)

4) Press < F7 > key. (Refer to the instructions given under the heading of "To Change Max. Sewing Speed".)

5) The following message appears on the display.

**MAX\_SPEED**

**PUSH**

**<F1> OR <F2>KEY.**

**F1:YES F2:NO**

Press < F1 > key.

6) The display indicates the following.

**MAX\_SPEED**

**= 2700\_**

\* The value shown at this point represents MAX-SPEED up to now.

7) Input max. sewing speed and press < ENTER > key. (Example: When max. sewing speed is set at 2000rpm.)

**MAX\_SPEED**

**= 2000\_<ENTER>**

8) Data on max. sewing speed is input after point A. (See Fig. 17-3)

9) Press < F8 > key to select "Change Menu".

10) Press < F8 > key to select "MDF END". Additional revision of max. sewing speed is completed. Arrow pointer moves to point B. (See Fig. 17-4)

11) Press < F3 > key.

Arrow pointer moves to the end of pattern according to the pattern data.(See Fig. 17-5)

12) End pattern preparation by making reference to the procedures described under the heading "To End Pattern Preparation" on Page 22.

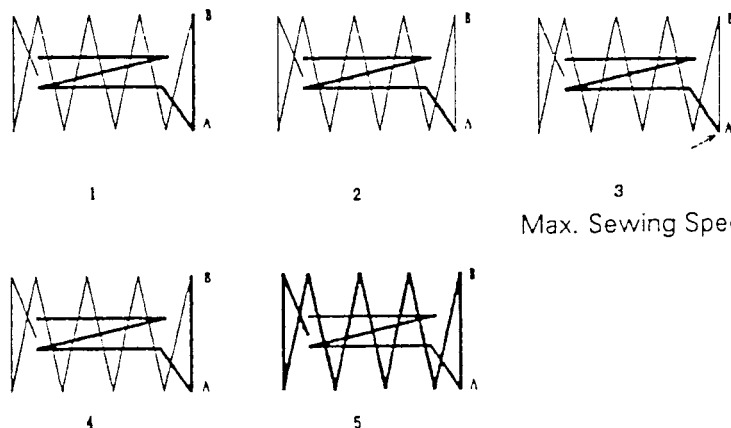


Fig. 17: Example 5

**(Example 6) To Change Stitch Length after Point A (INSERT)**

- 1) Move arrow pointer to point B by pressing < F1 > key. (See Fig. 18-1)
- 2) When arrow pointer has reached point B, press < F2 > key.

The following message appears on the display.

**F1:INSERT**

**F2:DELETE**

- 3) Press < F1 > key.

Arrow pointer moves to point A. (See Fig. 18-2)

- 4) Press < F6 > key. (See instructions given under the heading of "How to Change Stitch Length")

- 5) The following message appears on the display.

**STLENG IN**

**PUSH**

**<F1> OR <F2>KEY.**

**F1:YES F2:NO**

Press < F1 > key.

- 6) The display indicates the following.

**STLENG**

**= 100\_**

\* The value shown at this point represents the STLENG up to now.

- 7) Input stitch length data and press < ENTER > key. (Example: When stitch length is set for 3mm.)

**STLENG**

**= 30\_<ENTER>**

Stitch length data has been input after point A. (See Fig. 18-3)

- 8) Press < F10 > key to select "Change Menu".

- 9) Press < F8 > key to select "MDF END". Change of stitch length is now completed.

Arrow pointer moves to point B. (See Fig. 18-4)

- 10) Press < F3 > key.

Arrow pointer moves to the end of pattern according to the pattern data. (See Fig. 18-5)

- 11) End pattern preparation by making reference to the procedures described under the heading "To End Pattern Preparation" on Page 22.

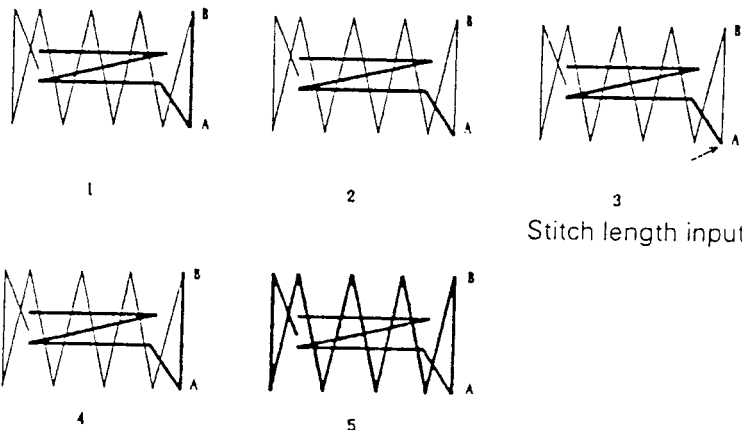


Fig. 18: Example 6

## 5. How to Enlarge or Reduce Pattern Size

Enlarge or reduce pattern size in the manner described below. (See Fig. 19)

- 1) Select 'PATTERN SCALE' on the menu and press < ENTER> key.
- 2) The display indicates the following.  
**INPUT DEVICE SELECT**  
**F1:TABLET**  
**F2:CURSOR**
- 3) Press either < F1> or < F2> key to select input device.  
 When tablet is selected, input the original point of pattern of a master pattern drawing using button cursor keys on the tablet.
- 4) Select the name of pattern which you desire to enlarge or reduce with cursor key.
- 5) The following message appears on the display.  
**SELECT PIVOT**
- 6) Input base point A for enlargement or reduction.  
 (See Fig. 19-1)
- 7) The display indicates the following.  
**SX=100.0\_**
- 8) Input X-scale and press < ENTER> key.  
 (Example: When X-scale is 200%.)  
**SX=200\_<ENTER>**
- 9) The display indicates the following.  
**SY=100.0\_**
- 10) Input Y-scale and press < ENTER> key.  
 (Example: When Y-scale is 200%.)  
**SY=200\_<ENTER>**
- 11) Pattern is enlarged or reduced with point A as a base point. (See Fig. 19-2)
- 12) The display indicates the following.  
**PUSH THE <F1> OR**  
**<F2>KEY.**  
**F1:YES F2:NO**
- 13) When < F1> key is pressed, scale is determined and operation is completed. (See Fig. 19-3)  
 When <F2> key is pressed, operation to enlarge or reduce pattern is performed over again.
- 14) End pattern preparation by making reference to the procedures described under the heading 'To End Pattern Preparation' on Page 22.

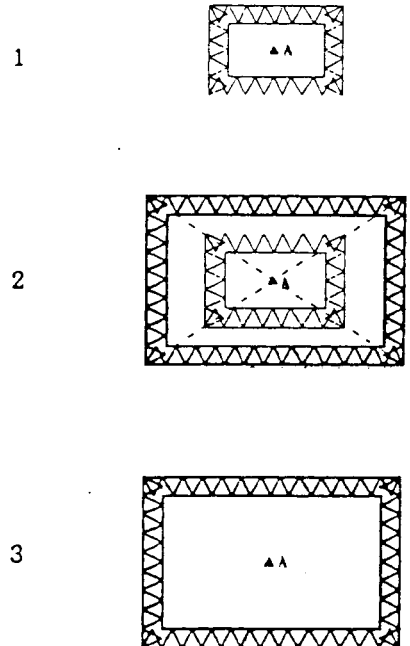


Fig. 19:  
Enlargement or Reduction  
of Pattern

## 6. To Move Pattern

Move pattern in the manner described below. (See Fig. 20)

- 1) Select "PATTERN COMBINATION" on the menu display and press <ENTER> key.
- 2) The display indicates the following.

**INPUT DEVICE SELECT**

**F1:TABLET**

**F2:CURSOR**

**PUSH THE <F1> OR <F2> KEY.**

- 3) Press either < F1> or < F2> key to select input device.

When tablet is selected, input the original point of pattern of a master pattern drawing with button cursor on the tablet.

- 4) Select the name of pattern which you desire to move with cursor key.

- 5) Move pattern by using input device. (See Fig. 20-2)

- 6) Press < ENTER> key. This determines the position to which the pattern is to be moved. (See Fig. 20-3)

- 7) The following message appears on the display.

**PUSH THE <F1> OR**

**<F2>KEY.**

**F1:YES F2:NO**

- 8) When < F1> key is pressed, the movement of pattern is determined and operation is completed.

When < F2> key is pressed, the movement of pattern is executed over again.

- 9) The following message appears on the display.

**DOSE IT READ**

**THE NEXT PATTERN**

**PUSH**

**<F1> OR <F2>KEY.**

**F1:YES F2:NO**

When different patterns are joined together, press < F1> key.

Then repeat step 4) and thereafter. To end the program, press < F2> key.

- 10) End pattern preparation by making reference to the procedures described under the heading "To End Pattern Preparation" on Page 22.

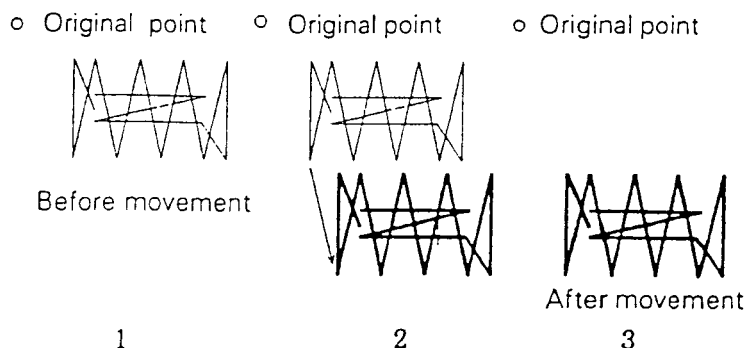


Fig. 20: Movement of Pattern



## 7. To Select Pattern

- 1) Select "PATTERN SELECTION" and press < ENTER > key.
- 2) The display changes to pattern selection display screen with the following message appearing on the display. (See Fig. 21)

### **Select Pattern**

64 patterns are available for selection.

- 3) Select the name of file with cursor key and press < ENTER > key.  
The pattern that has been selected appears on the display.
- 4) The following message appears on the display.

### **Dose it selected this Pattern**

**Push <F1> or <F2> Key.**

**<F1:Yes>            <F2:No>**

**Quit<ESC> Key>**

- 5) Press < F1 > key to determine the selection of pattern.  
When < F2 > key is pressed, the pattern which has been selected is canceled.
- 6) The following message appears on the display.

### **Dose it read the next Pattern**

**Push <F1> or <F2> Key.**

**<F1:Yes>            <F2:End>**

**Quit<ESC> Key**

- 7) When < F1 > key is pressed, the display changes to pattern selection display.  
Repeat step 2) and thereafter.  
When < F2 > key is pressed, selection of pattern is completed.
- 8) The display indicates the following.

### **SAVE SEWING PATTERN DATA**

### **INPUT PATTERN NAME**

**(MAXIMUM LENGTH OF FILE NAME IS 8 CHARACTERS.)**

- 9) Input the name of pattern and press < ENTER > key.  
This will be saved in disk with extension "HEX" assigned after File Name.  
(Example: 1669u. HEX)  
This file is used when writing data into EEPROM which will be explained on the following pages.  
In case pattern is not saved, press < ESC > key.
- 10) The display indicates the following.  
**Push any key**
- 11) The display returns to menu display when any key is pressed.
- 12) To return to MS-DOS mode after finishing pattern preparation program, select "End" on the menu display and press < Enter > Key.

(\*1)                      (\*1)                      (\*1)                      (\*1)

1       2       3       4

**READ SEWING PATTERN DATA**

Using a ARROW Key, Select name of data. (Cancel: <<ESC>>Key)

**Select Pattern**

Fig. 21: Pattern Selection Display Screen

Note: Relationship Between Above Nos.(\*1) and Pattern Nos.

No.(*1)	Pattern No,
1	1
2	1A
3	2
4	2A
5	3
6	3A
7	4
8	5
9	6
10	7
•	•
•	•
•	•

## 8. Options

- 1) Select item "OPTIONS" on menu display and press < ENTER> key.
- 2) "OPTIONS" display screen appears. (See Fig. 22)

"drive" is to set a driver for reading in and writing pattern data. Select it with cursor key and press < ENTER> key.

"directory" is to set a directory for reading in and writing pattern data. Input the name of directory and press < ENTER> key.

- 3) End OPTIONS with < ESC> key.  
The contents which have been set will be stored.

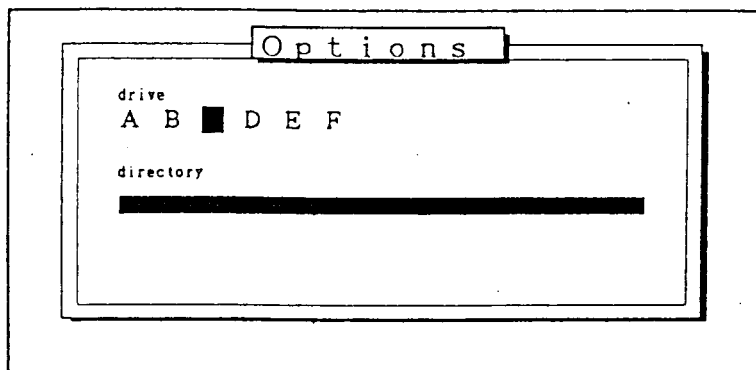


Fig. 22: OPTIONS Display Screen

## 9. Description on Tablet

Kurta XGT Digitizing

### 1. Specification of Tablet (Digitizer)

Manufacturer : Seiko Electronic Industrial Co., Ltd.  
Type : DT-3213-00

### 2. Button Cursor

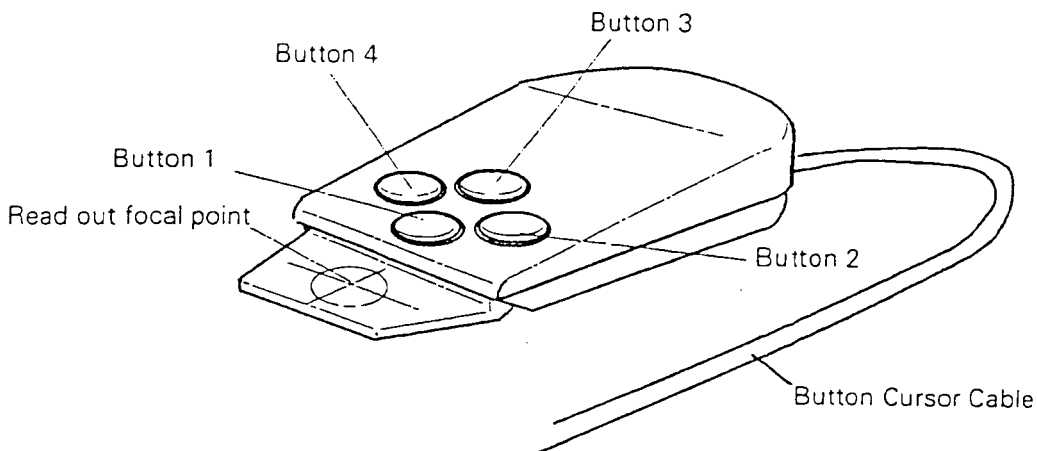


Fig. 23 Button Cursor

Each of the 4 button cursors are fitted with a button and serve the following functions.

- Button 1 — Inputs pattern data.
- Button 2 — Delete pattern data
- Button 3 — Not used
- Button 4 — Not used

By moving 4 button cursor on the top of the tablet body and pressing Button 1, coordinates at read out focal point can be input. Also, data which have been input can be deleted on a data by data basis by pressing Button 2 on the tablet body.

### 3. Function Switch

Function switches are used to set various functions of the tablet and located on the bottom side of the tablet.

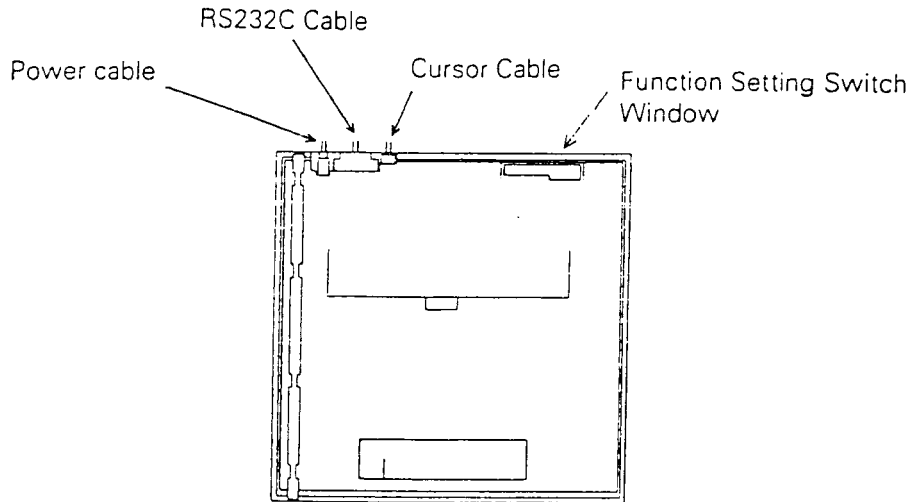


Fig. 24 Underside of Tablet

Function switches should be set as shown below.

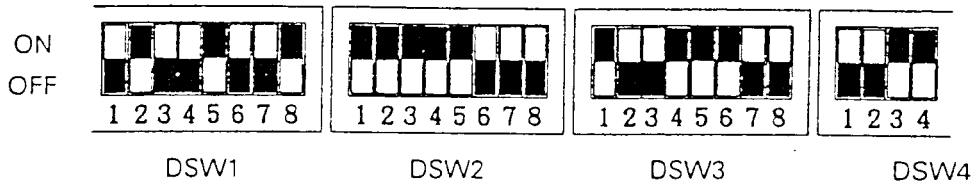


Fig. 25 Functions Switches

When these switches are set incorrectly, it can cause the program to malfunction. Also, be sure to turn main switch 'OFF' before setting function switches. In case function switches are set after turning main switch 'ON', the contents of pre-set functions will remain unchanged.

## 10. Sewing Data

When a pattern is made with this software, 5 data files (\*.PTD \*.XYD \*.569 \*.56R \*.HEX) are prepared.

(\*PTD \*.XYD \*.569) are used for modifying, enlarging, reducing and moving a pattern.

(\*56R \*.HEX) are used as data for writing into EEPROM.

# 11. How to Write Sewing Data into "EEPROM"

## 1. EEPROM

Manufacturer : ATMEL

Type : AT28HC256-70PC

## 2. ROM Writer

Manufacturer : DATA I/O (Made in USA)

Type : ChipLab+

The method to be followed in writing sewing data is explained below by taking the case of EPROM Writer, 'ChipLab', made by DATA I/O.

(When a ROM writer made by other manufacturer is used, check to determine whether the above "EEPROM" is usable or not and then refer to the service manual prepared by the manufacturer.)

## 3. To install ChipLab software

### 1) To connect hardware

(1) Turn main switch on personal computer 'OFF'.

(2) Connect ChipLab to personal computer with the cable furnished with the unit.

(Connect cable to parallel port on the side of personal computer.)

(3) Turn main switch on personal computer 'ON'.

(4) Turn power switch on ChipLab 'ON'.

### 2) To install software

(1) Put installation disk #1 into disk drive.

(2) Type as follows and press ENTER key.

a:install or b:install

(a: or b: represents the name of the drive in which the disk is saved.)

(3) Answer the questions according to the instructions given on the display.

(4) Turn power switch on ChipLab 'OFF'.

(5) Turn main switch on personal computer 'OFF'.

\* Refer to the 'Operator's Guide' prepared by the manufacturer for details.

## 4. Execution of program

1) Check to see that the personal computer is connected to ChipLab with the cable furnished with the unit.

2) Turn power switch on personal computer 'ON'.

3) Turn power switch on ChipLab 'ON'.

Input data to personal computer by typing as follows.

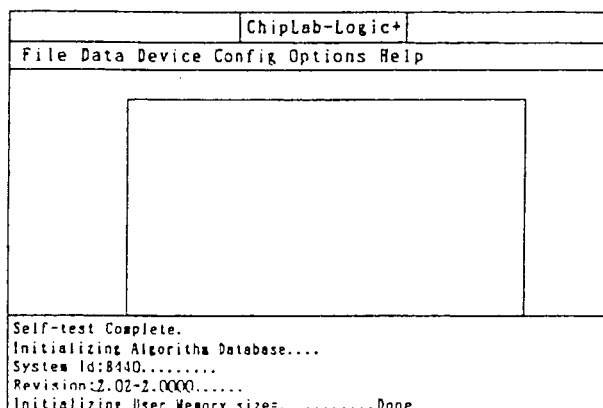
**chipLab**

Press < ENTER > key. The program is put into execution.

4) The display indicates the following.

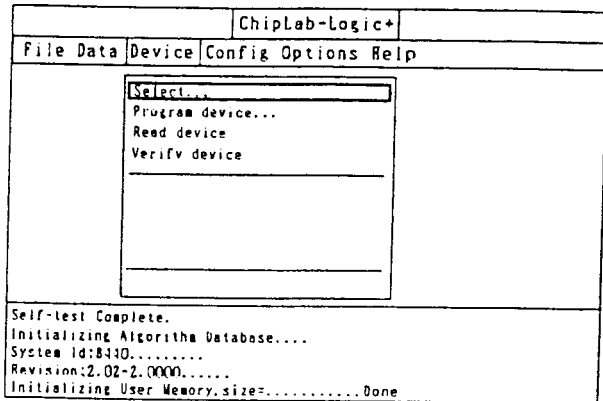
Subsequent operations are performed by using a mouse. In case the mouse is inoperative, install a mouse driver before switching power for ChipLab 'ON'

ChipLab Main  
Display Screen

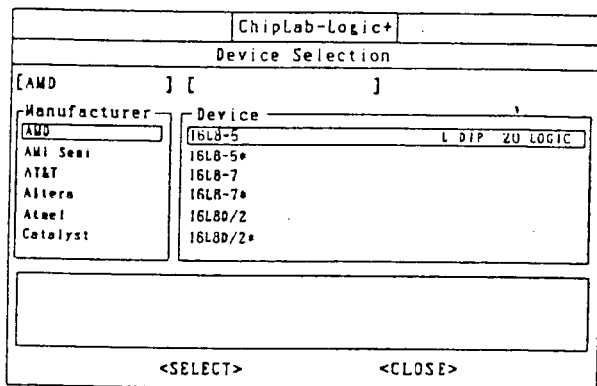


5. To select write device

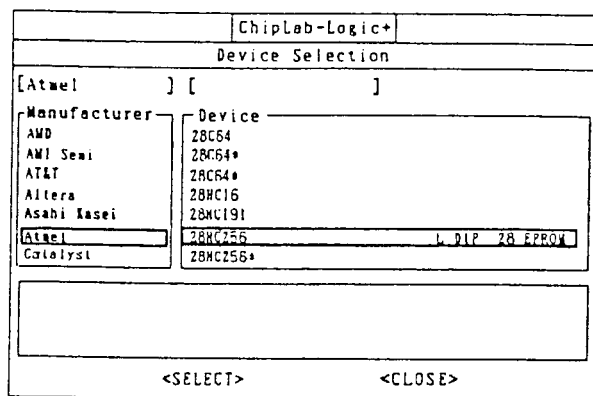
- 1) Move mouse cursor to "Device" and press left button on mouse.
- 2) The following display appears.



- 3) Move mouse cursor to "Select" and press left button on mouse.
- 4) The following display appears.



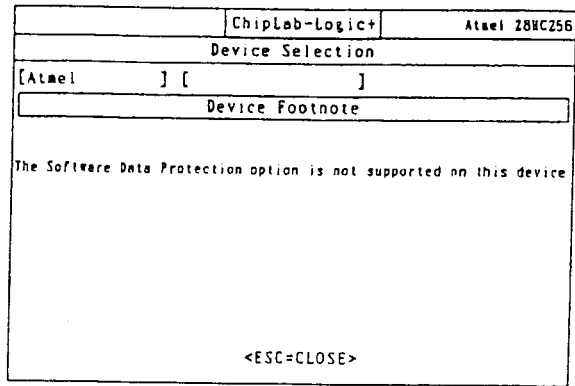
- 5) Move mouse cursor to "Atmel" of "Manufacturer" and press left button on mouse.
- 6) Move mouse cursor to "28HC256" of "Device" and press left button on mouse.
- 7) The following display appears.



- 8) Move mouse cursor to "<SELECT>" and press left button on mouse.



9) The display indicates the following.



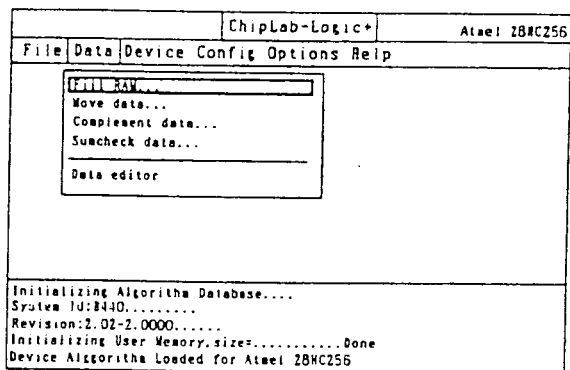
10) Move mouse cursor to <ESC=CLOSE> and press left button on mouse.

11) The display returns to main display.

6. To clear data area

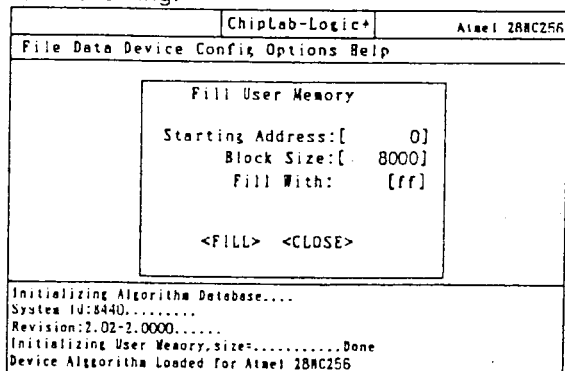
1) Move mouse cursor to 'Data' and press left button on mouse.

2) The following display appears.



3) Move mouse cursor to "Fill RAM" and press left button on mouse.

4) The display indicates the following.



(1) Input "0" to Starting Address and press <TAB> key.

(2) Input "8000" to Block Size and press <TAB> key.

(3) Input "FF" to Fill With and press <TAB> key.

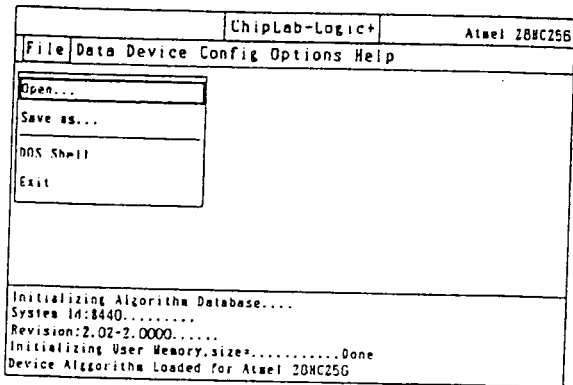
(4) Move mouse cursor to <FILL> and press left button on mouse.

(5) Move mouse cursor to <CLOSE> and press left button on mouse.

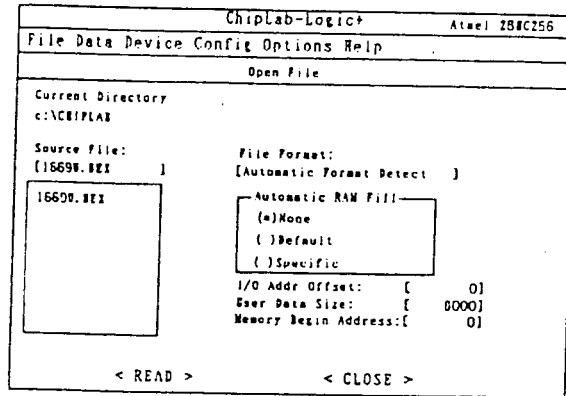
(6) The display returns to main display.

7. How to read in sewing data

- 1) Move mouse cursor to **'File'** and press left button on mouse.
- 2) The following display appears.

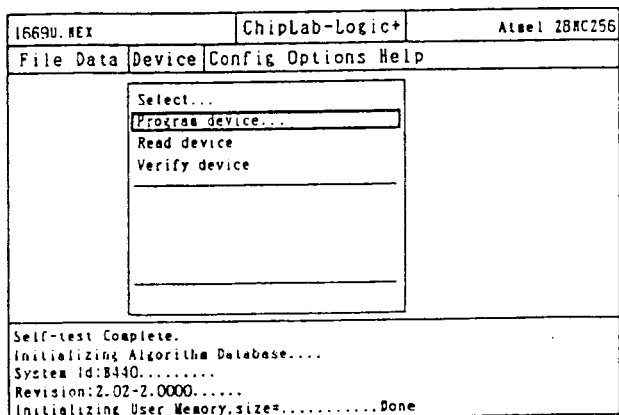


- 3) Move mouse cursor to **'Open'** and press left button on mouse.
- 4) The display indicates the following.

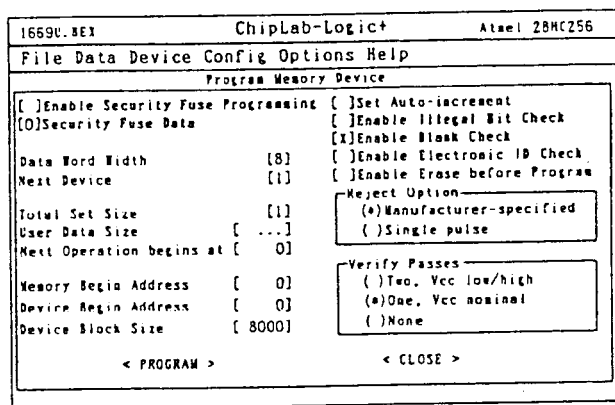


- (1) Select the name of pattern (\*.HEX) with mouse and press <TAB> key.
- (2) Press <TAB> key.
- (3) Press <TAB> key.
- (4) Input \* 0 \* to I/O Addr Offset and press <TAB> key.
- (5) Input \*8000\* to User Data Size and press <TAB> key.
- (6) Input \* 0 \* to Memory Beg in Address and press <TAB> key.
- (7) Move mouse cursor to **'READ'** and press left button on mouse.
- (8) The display returns to main display.

8. To write sewing data
  - 1) Insert a blank 'Atmel AT28HC256-70PC' into socket.
  - 2) Move mouse cursor to 'Device' and press left button on mouse.
  - 3) The display indicates the following.



- 4) Move mouse cursor to 'Program Device' and press left button on mouse.
- 5) The display indicates the following.



- 6) Move mouse cursor to '<PROGRAM>' and press left button on mouse.
- 7) During the programming of device, a box showing that the programming is being performed, appears on the display.

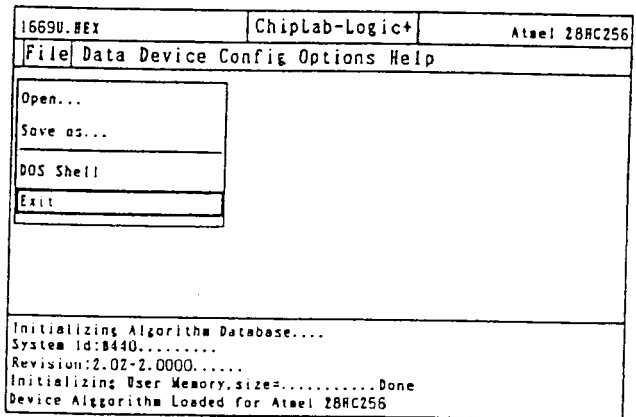
After completion of programming, the following message appears on the display.

**Program Operation Successful:**

- 8) Move mouse cursor to '<CLOSE>' and press left button on mouse.
- 9) The display returns to main display.
- 10) Remove device from socket.

9. To end writing of sewing data

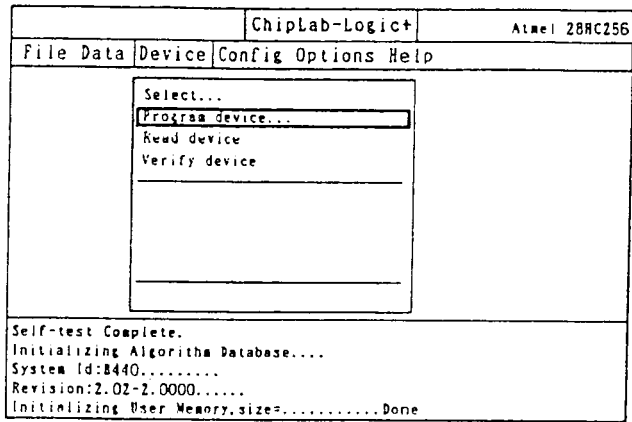
- 1) Move mouse cursor to **'File'** and press left button on mouse.
- 2) The display indicates the following.



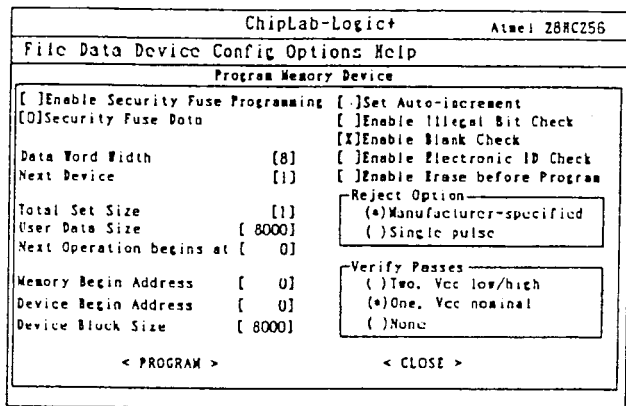
- 3) Move mouse cursor to **'Exit'** and press left button on mouse.
- 4) **'ChipLab'** program is completed.

10. To blank out device

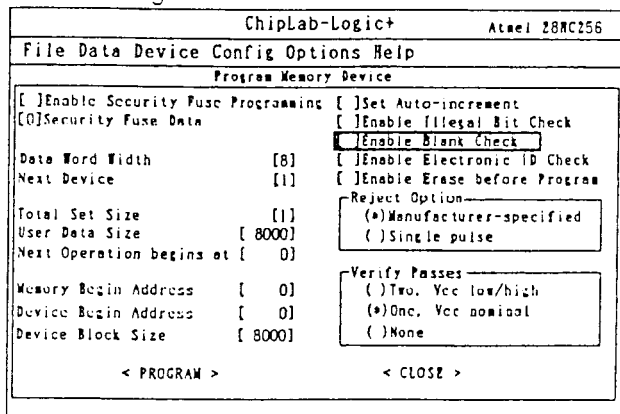
- 1) Go through the procedures described up to item 6 "To Clear Data Area".
- 2) Insert a blank **'Atmel AT28HC256-70PC'** into socket.
- 3) Move mouse cursor to **'Device'** and press left button on mouse.
- 4) The display indicates the following.



- 5) Move mouse cursor to **'Program Device'** and press left button on mouse.
- 6) The display indicates the following.



- 7) Move mouse cursor to **'Enable Blank Check'** and by pressing left button on mouse, delete [\*] before **'Enable Blank Check'**.
- 8) The display indicates the following.



- 9) Move mouse cursor to '<PROGRAM>' and press left button on mouse.
- 10) During the programming of device, a box showing that programming is in process, appears at the center portion of the display.  
When operation is completed, the following message appears on the display.

**Program Operation Successful:**

- 11) Move mouse cursor to '<CLOSE>' and press left button on mouse.
- 12) The display returns to main display.
- 13) Remove socket from device.
- 14) Go through the procedures described under item 9. "To End Writing of Sewing Data".