

Industrial Sewing Machine USER MANUAL

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1 SYSTEM START AND STOP

1.1 SYSTEM START

Before system starting, please confirm the power linkage. Press the power switch, the system immediately carries out the auto-inspection. After inspection, the screen will display the system Logo illustration.

1.2 SYSTEM STOP

The main manual screen as shown on the below screen.

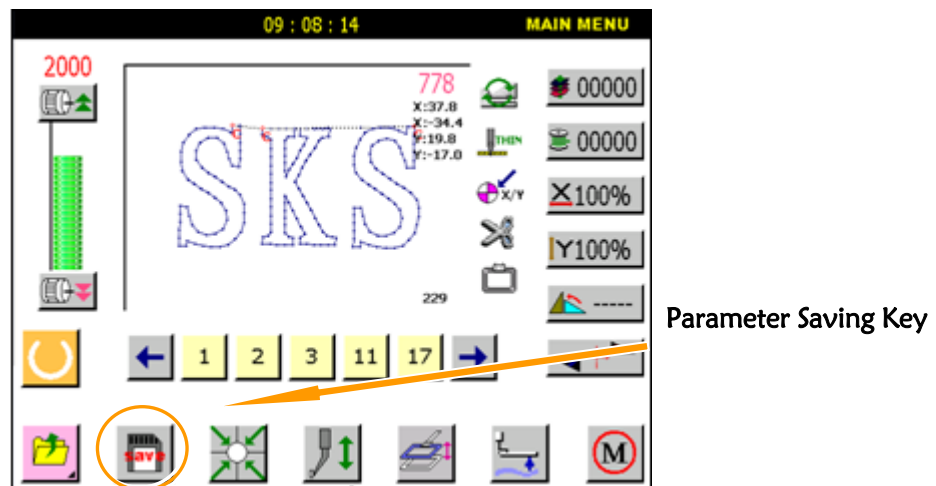



Figure 1-1 Main Manual Screen

On the main menu, press  to enter the parameter saving screen as shown on the below screen. Then cut off the whole power switch of system, and close the computer.

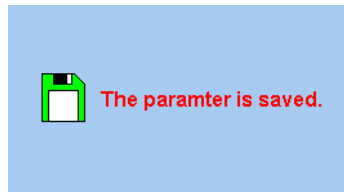





Figure 1-2 Parmater Saving Screen

Caution: After pressing  on the main menu, the informations will be recorded as follows: Current speed , needlework numbers , bass line numbers, current file.

After pressing  on the auto-process menu, the informations will be recorded as follows: Current speed , needlework count, bass line count, current file, X/Y zoom times, circumrotate angle.

Please Press  when you use the function of needlework count or bass line count, change needlework pattern or needlework speed before closing the machine, until the parameters have been saved to cut the power. Otherwise cutting power directly.

2 SYSTEM BASIC SCREEN

After displaying Logo screen, the system enters the main menu screen automatically.

2.1 AREA DIVISION OF MAIN MENU

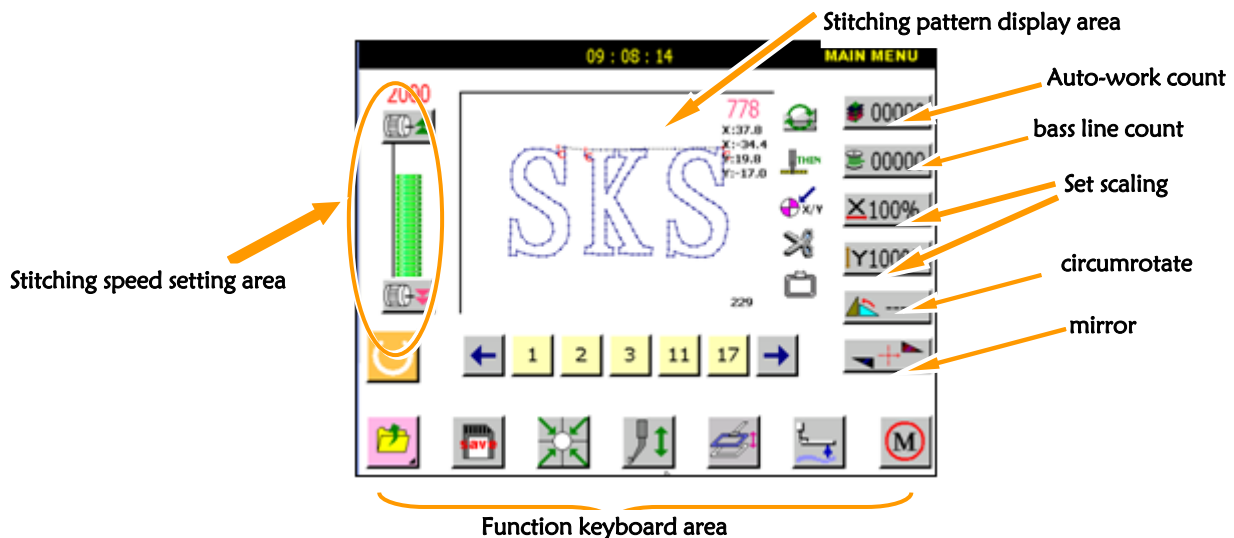


Figure 2-1 Function Area Division of Main Menu

2.2 EXPLANATIONS OF MAIN MENU KEYS

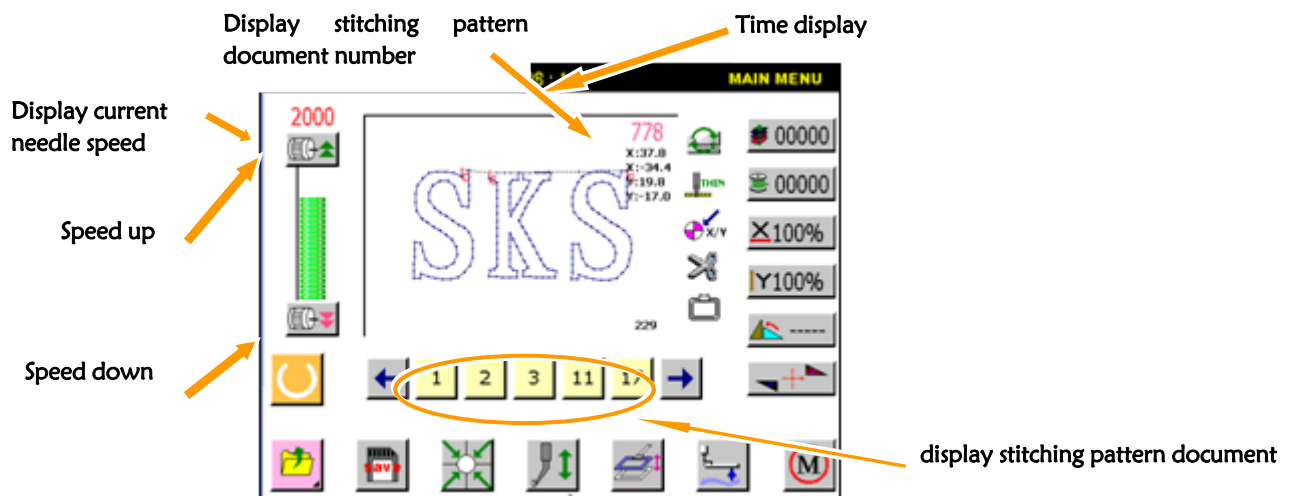







Figure 2-2 Explanations of Main Menu Keys

-  Home position return will be executed.
-  Full screen will be executed.
-  Parameter saving key
-  Lift or low the press foot
-  When press this key,the screen switching into manual operation screen to control x-y Axis moving.(Refer figure 2-3 manual operation screen),as show on the below screen.

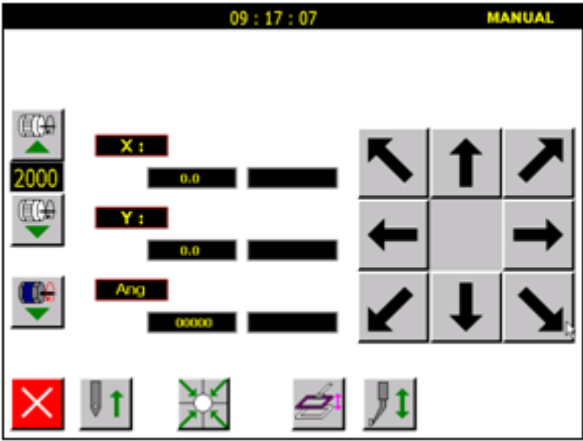


Figure 2-3 manual operation screen



..... Press the key to open menu screen, as show on the below screen.

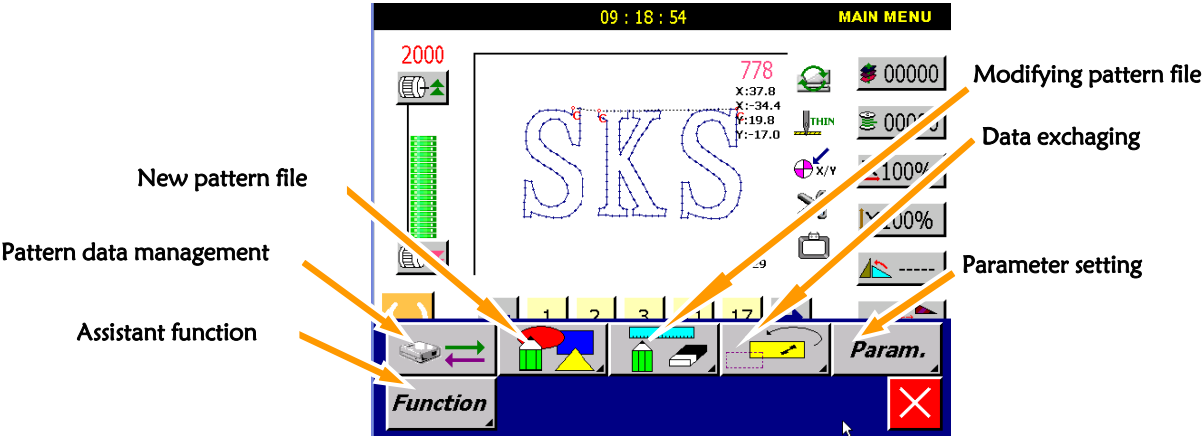
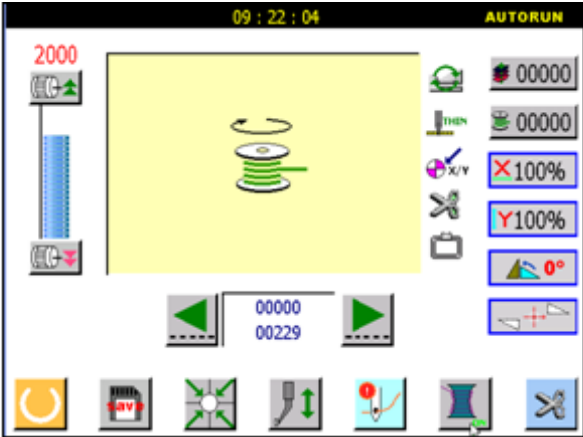


Figure 2-4 Menu Open Screen





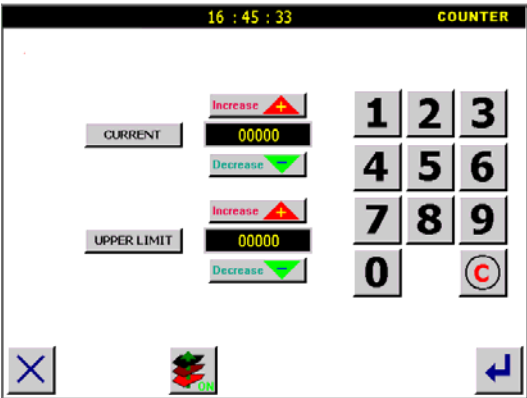
..... Press the key to set whether allow to wind lines or not. Allow to wind lines as show.



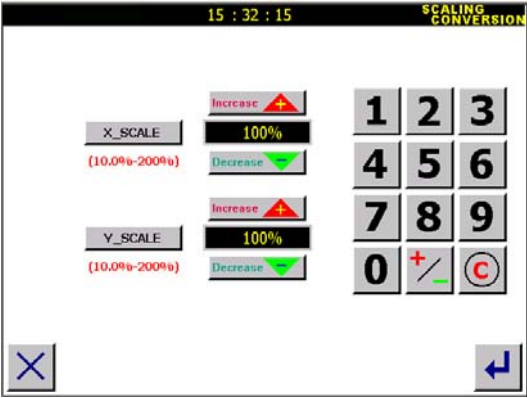
..... Press the key enter automatic operation screen.(Explanation refer to figure2-3),as show on the below screen.



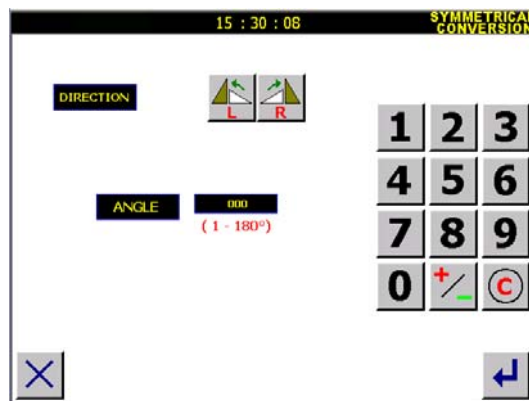
 00000 /  00000Press the key enter workpiece counter/ bass line counter setting screen. The screen as show.



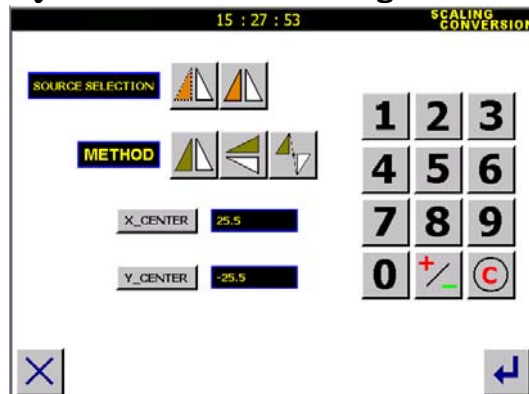
 100% /  100%Press the key enter zoom times setting screen. The screen as show.



Press the key to enter circumrotate angle setting screen.The screen as show.



.....Press the key to enter mirror setting screen. The screen as show.



Caution:When pulling on line,must ont trample and misplay trample the run switch which makes sartorius to run, it is dangerous. When pulling on line, must keep away from the run switch.

2.3 AUTOMATIC OPERATION SCREEN

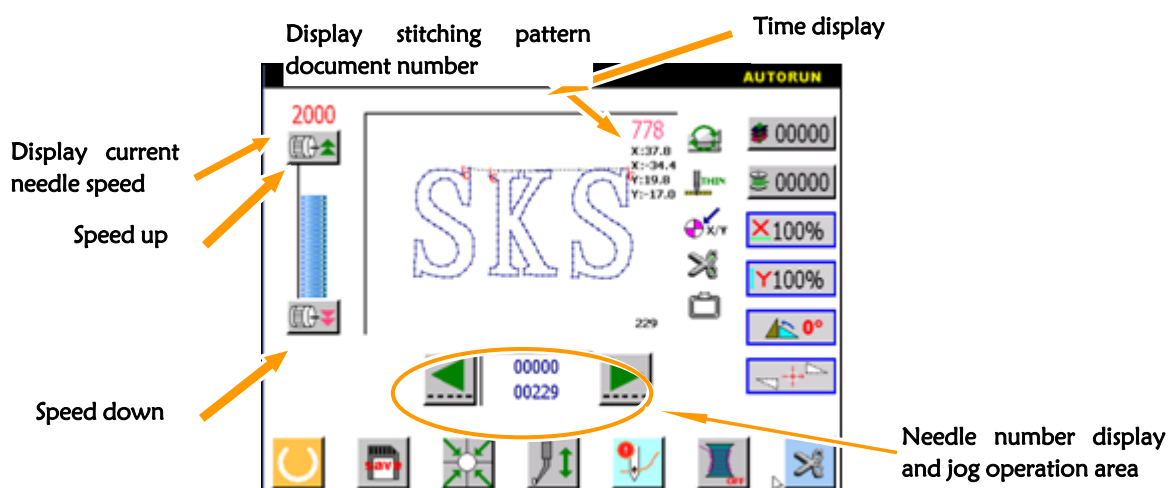


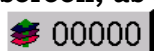


Figure 2-5 Explanations of Main Menu Keys


2.4 COUNT SETTING SCREEN

Press  00000 /  00000 on main menu screen, and enter the count setting screen, as shown below.



..... Press the key enter workpiece counter setting screen, as shown in

Illustration 2-6.

 00000 Press the key enter the suture counter setting screen, as shown in Illustration 2-7.

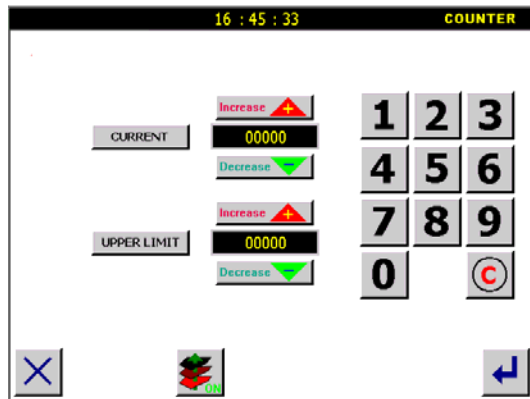


Illustration 2-6 Counter Setting Screen

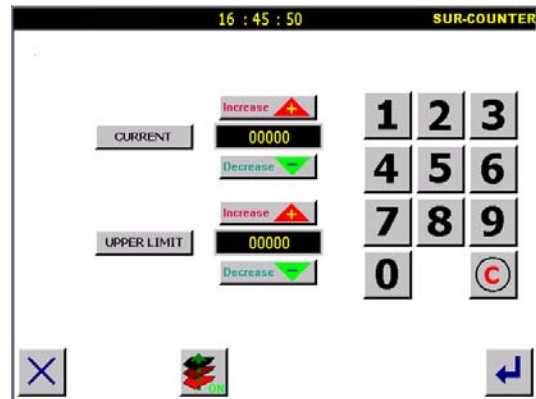











Illustration 2-7 Suture Counter Setting Screen

 /  Press the keys to set the available/ unavailable counter.

 Press the key and cancel suspensive operation.

 Press the key and input the initialized value in digital input area, then press  to conform; if not input, press  directly.

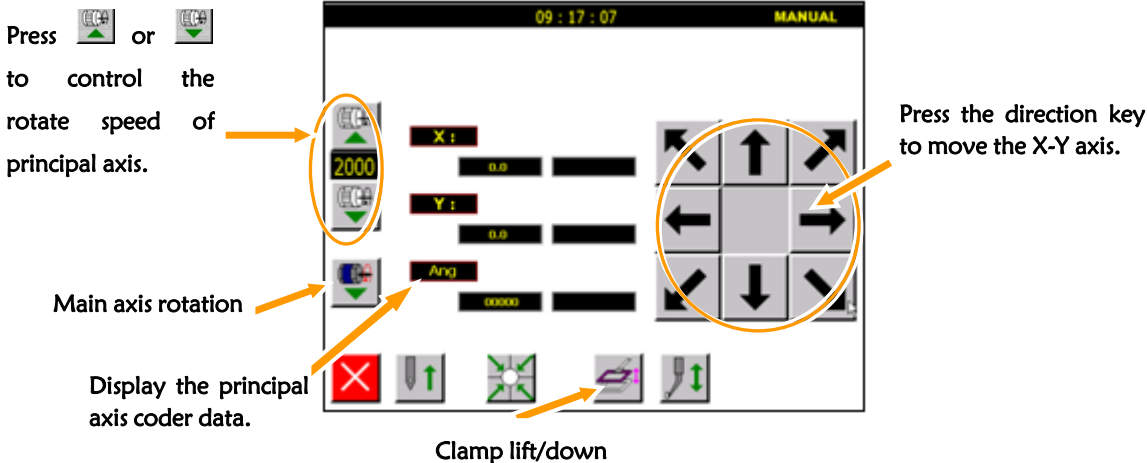
 Press the key and input the total count in digital input area, then press  to confirm; if not input, press  directly.

Caution: Before setting initialized value, set workpieces, or can not input the initialized value into the system.

2.5 MANUAL OPERATION SCREEN

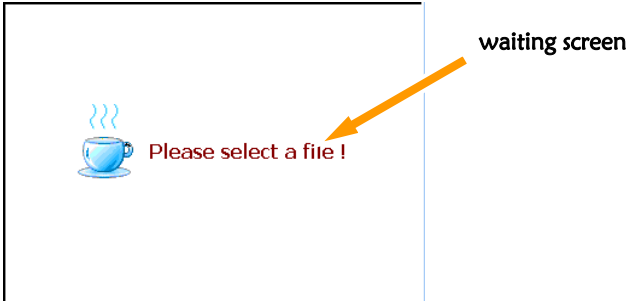
When on main menu screen, press  to enter the manual operation screen. Then move X_Y axis.





2.6 DEFAULT SCREEN DATA

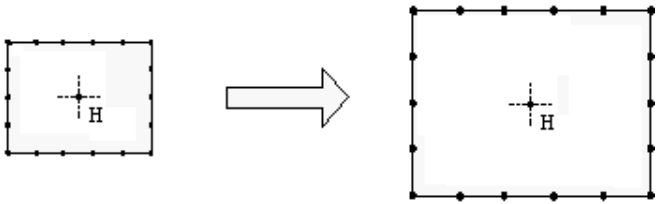
When on main menu screen, if there is no data or selecting data, the system will display the waiting screen on pattern display area as shown on the below screen.



2.7 SCALING \ ROTATION \ SYMMETRICAL

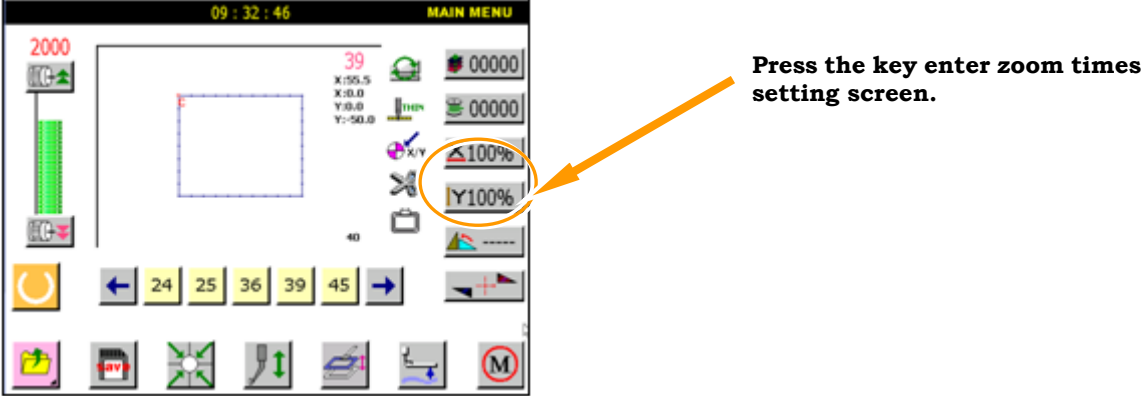
2.7.1 SCALING

[Example] The data will be enlarged (X:120%, 120%) with a fixed stitch length centering on the Point H (Home position) in the following type of stitching data.

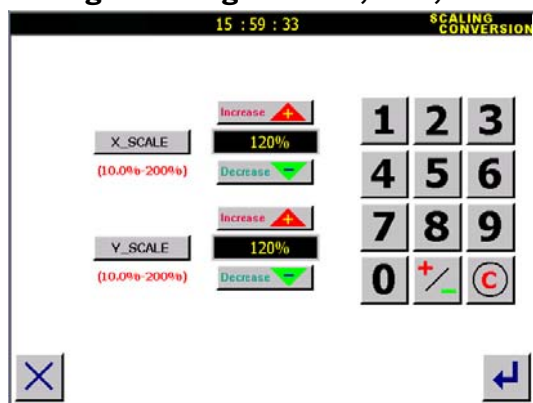


[Operation details]

① Selecting scaling

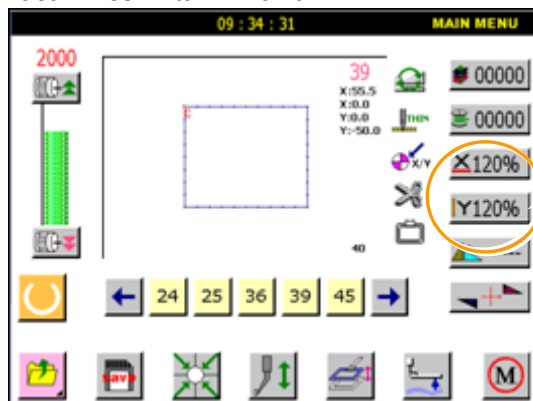


②Setting reducing method, etc., and executing



- Press **X_SCALE** and **Y_SCALE** separately.
Set the X, Y enlargement rate (reduction rate) with the numeric keys. (X:120%, 120%) with a fixed stitch length centering on the Point H (Home position).
- Press to confirm.

③Return to main menu



Display the new scaling.

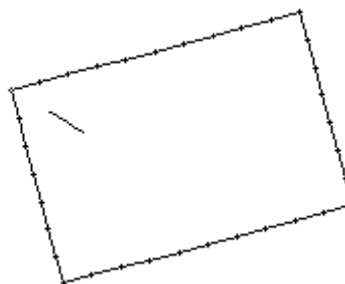
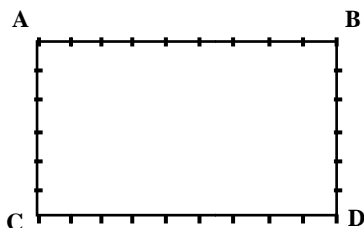
④Confirm the modify



- Press enter automatic operation screen, then the data will be enlarged.

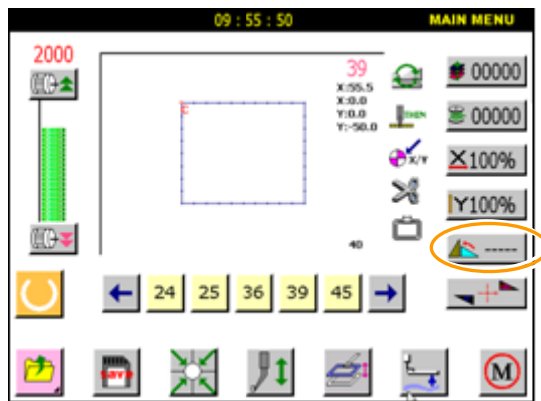
2.7.2 ROTATION


[Example] The pattern will be rotated by 45° centering on the Point A in the following type of stitching data.



[Operation details]




① Selecting rotation



- Press  enter circumrotate angle setting screen.

② Setting the rotation method, etc.



- Direction:
 -  —Left rotation
 -  —Right rotation
- Input the angle from the numeric key.
(Input 45° for this example.)
- Press .


③ Return to main menu



Display the new angle.

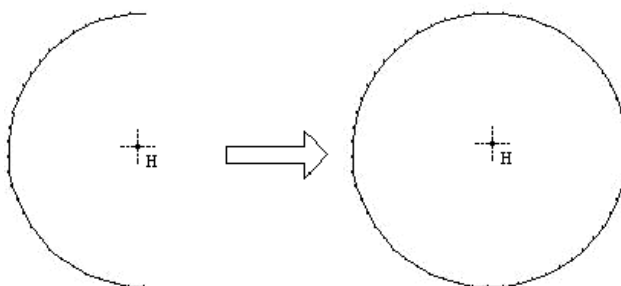
④ Confirm the modify



- Press  enter automatic operation screen, then the data will be changed.

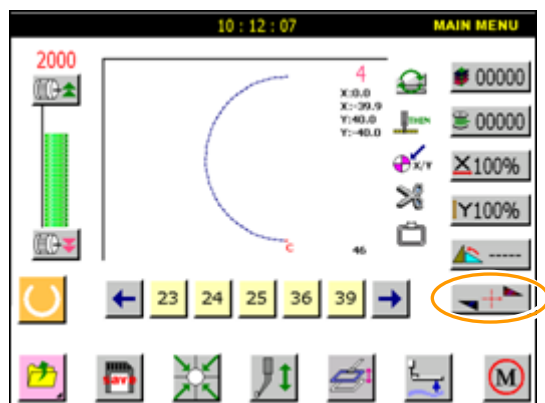
2.7.3 SYMMETRICAL

[Example] The left state of the following type of stitching data will be converted into a right state.



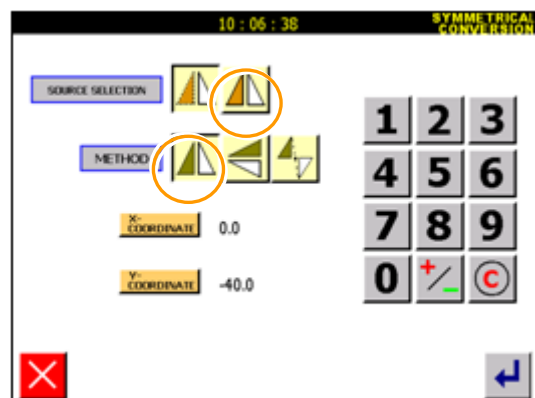
[Operation details]

① Selecting symmetrical



- Press  enter symmetrical setting screen.


② Setting the symmetrical method, etc.




- Clearing symmetrical origin data:

 —Delete symmetrical origin data

 —Keep symmetrical origin data

(Press  for this example.)

Symmetrical direction:

 —X symmetrical data creation (Select "X symmetrical data creation" for this example.)

 —Y symmetrical data creation

 —XY symmetrical data creation


- Press .

③ Return to main menu



④ Confirm the modify




- Press  enter automatic operation screen, then the data will be changed.

2.8 SYSTEM LOCK AND PAUSE FUNCTION

The system lock or pause function is realized through pressing the pause key on stitching machine head, according to the pause switch type set of pause parameter in user parameter [Program](#).

(1) When parameter is set as the normal switch, the pause function can be realized by pressing pause key in automatic running process. The pattern display area will display the pause sign sign as shown on the below screen.



The operations after pause are realized based on the parameter set in pause parameter .

(2) When parameter is set as the automatic lock switch, the lock function can be realized by pressing pause key on any screen. The system interface will display the locked screen, as shown below.



All the operations are locked to protect the operators when adjusting equipment or maintenance; after releasing the pause key, the operations are restored.


In automatic processing, when press the pause key, the system displays the pause sign and waits for trimming.

3 READING, OPERATING AND MANAGING PATTERN DATA

3.1 READING AND MANAGING PATTERN DATA

[Operation details]:



- Select the data in data menu display area.
- If there is not required data in current display area, then use  to switch. For example, when select No. 1 data, only press No. 1 key, the system will open the data automatically.

- System opens the No. 1 data in data display area.
- Trample running switch, the system carries out the selected data.



3.2 CREATING PATTERN DATA

[Operation details]:

The creating process is explained by the following creating process of stitching data.

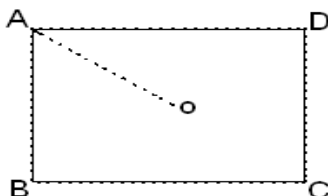




Illustration 3-1 Example image


- ① Pressing  key on main menu screen and opening the menu window, as shown below




Press  key, and create the new pattern data.

② Setting stitch length and speed





- Use numeric key to input stitch length, and press  to set. The distance between needles must be within 0.1mm~12.7mm


- Select speed.

 — Code H means high speed.

Please set code H in user parameter.

 — Code MD2 means middle-high speed.

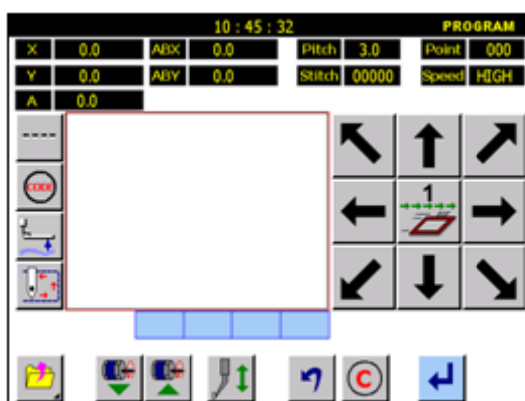
 — Code MD1 means middle-low speed.

 — Code L means low speed.
(Code H is the default speed.)







-  Delete input





After set stitch length and speed, press  to set, and enter data creating screen, as shown on illustration 3-2.

③ Create pattern data



Illustraiton 3-2 Pattern Data Compiling Screen

- In  (feed) state, press the direction key  to move the needle from home position to Point A, and press  to confirm.
- Press  and enter the pattern data set screen (Illustration 12). Select  (straight line input) and press  to return.

- c. Press direction key , the needle moves from A to B and press  to confirm.
- d. Press direction key , the stitch moves from B to C and press  to confirm.
- e. Press direction key , the stitch moves from C to D and press  to confirm.
- f. Press direction key , the stitch moves from D to A and press  to confire. (The straight line data of example image is realized.)

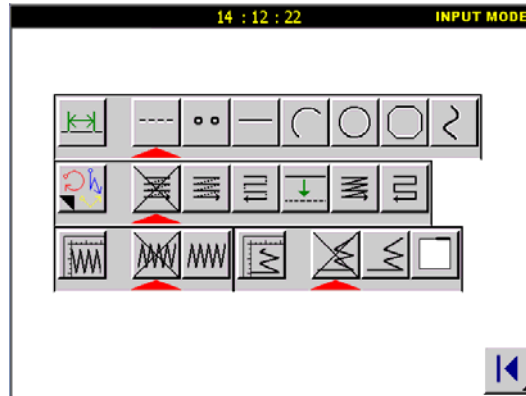
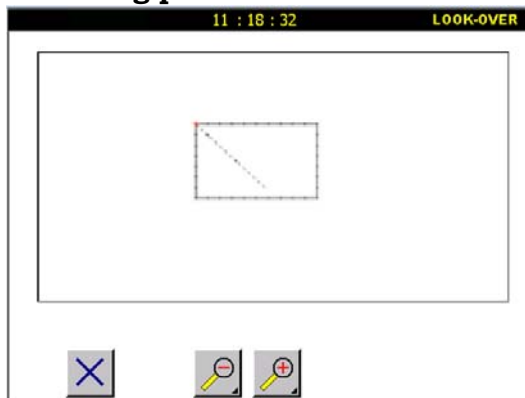






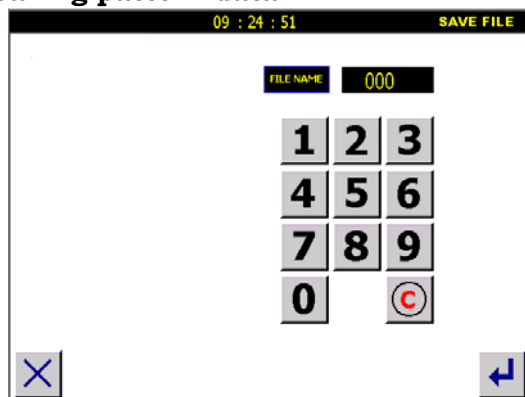
Illustration 3-3 Data Set Screen





④ Confirming pattern.



- On pattern creating data screen, press  key to enter the pattern data for checking out images, as shown in left pattern.
- Use  or  key to reduce or amplify images for confirming.
- After setting, press  key and return to pattern creating data screen.

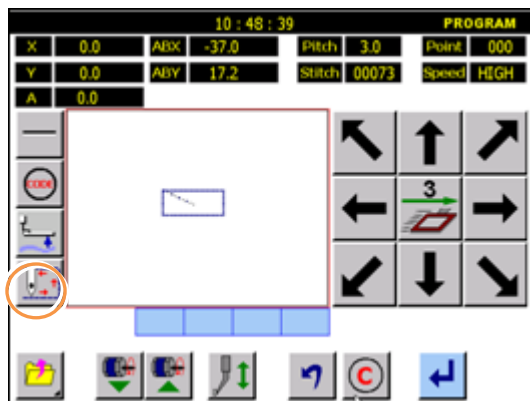
⑤ Saving pattern data




- On pattern data creating screen, press the  key to enter pattern data store screen, as shown in left screen.
- Use numeric key to input data number (pattern number).
-  Delete input
- After input data number (pattern number), press  key to set.
- Press  key and reuren to pattern creating data screen.

Memo: The jogging verification mode is used for verifying the pattern. Please operate according to the illustration.

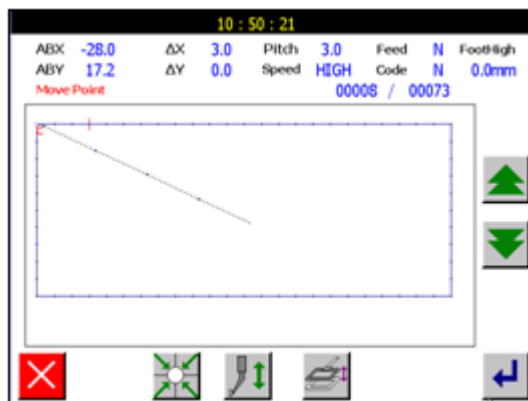
The pattern data creating screen is shown as below.



- Press the  key to enter the jogging verification mode.



Caution: Enter the mode only when the both display coordinates of X/Y are zero (after setting the one input operation). If the display coordinates of X/Y are not zero, the system will not execute the jogging verification mode.

After entering :












Memo: If the stitch is not in the last input point when returning, the stitch will move to the last input point automatically for conveniently creating.

3.3 MANAGING DATA

Press  key and  key on main menu screen. The system will enter the stitching pattern data management screen, as shown below.



-  — Copy multi-pattern data at the same time.
-  — Copy or rename the single data.
-  — Delete data.
-  — Select all the pattern data of the current disk.
-  — Switch of internal disk (CF card ) / external disk (USB )
-  — Page up.
-  — Page down.

When press a certain pattern data as shown below, the number has a different color.




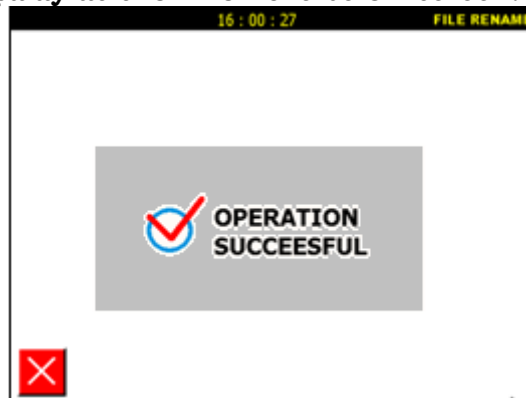
3.3.1 COPYING DATA (DATA RENAME)

On pattern data management screen, one pattern data is selected. As shown above, the No. 13 is selected as the current data.



- Use numeric key to input target data name. That is, input the name of copy data.
- Use **Copy mode** to select whether to store the source data or not. If store resource data, the copy function is realized; if delete source data, the rename function is realized.
- Use **Copy target** to select the target disk of copy data. If select local PC memory, system stores the copied data in system internal memory; if select external memory, the system stores the copied data in USB.

After setting, press  to set. If there is successful operation, the <successful operation> screen will display as shown on the below screen.

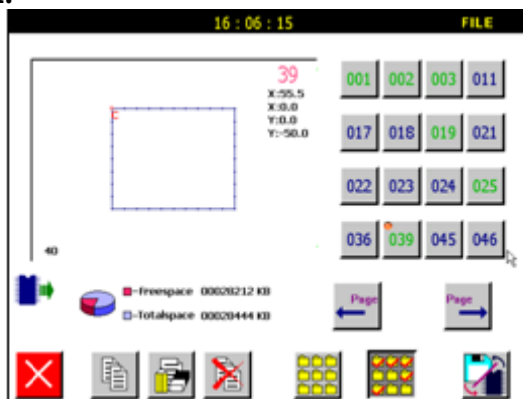



If there is unsuccessful operation, the <unsuccessful operation> screen will display as shown on the below screen.

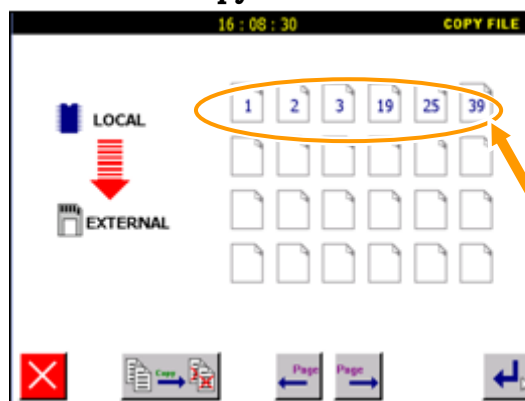


3.3.2 COPYING MULTI-DATA


This function can copy multi-data of local PC. Select the data you want to copy as shown on the below screen.

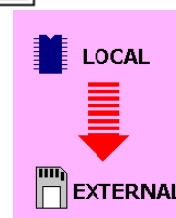



The No. 1, No. 2, NO. 3, No. 19, No. 25, and No. 39 data in screen are selected. Then, press  key to enter the <multi-data copy> screen.





Display the selected data

• If the selected data of the above screen are stored in the internal memory of local PC ( sign is the internal memory.),the copy direction is suggested as the right image in <multi-data copy> screen.



• If the selected data of the above screen are stored in the external memory of local PC ( sign is the external memory.),the copy direction is suggested as the right image in <multi-data copy> screen.



-  — Select to cover the homonymic data. That is, obey the whole covering principle.
-  — Select no to cover the homonymic data. That is, when there is homonymic file, the system will not copy; when there is not, the system will copy.

3.3.3 DELETING DATA

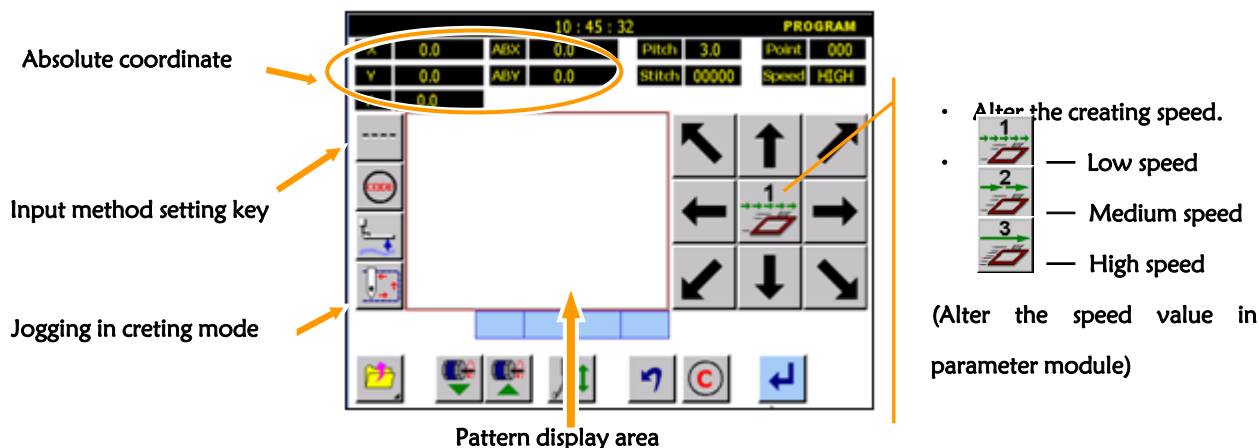
Press the data keys which need to be deleted. After selecting, press  key to enter <data deletion> screen.



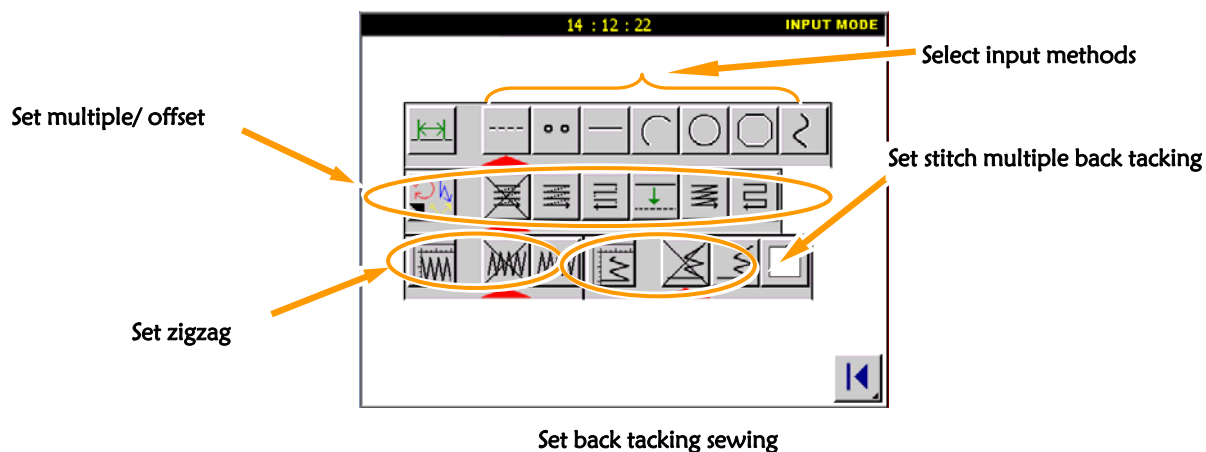
• Press  to set the deletion.

4 CREATING STITCHING PATTERN DATA

The pattern input setting is involved in the process of creating stitching pattern.




Press one of four keys above, the system will enter the set screen as shown on the below screen.



- (1) **[Set Input Method]** Includes point input, linear input, broken line input, circle input, arc input, and curve input.
- (2) **[Set Multiple/ Offset]** Includes non setting, multiple sewing (feed), reverse multiple (feed), multiple sewing (sewing), reverse multiple (sewing) and offset input.
- (3) **[Set Zigzag Input]** Includes zigzag input and setting no zigzag.
- (4) **[Set Back Tacking Sewing]** Includes setting no tacking, back tacking sewing and multiple back tacking stitch.








5 INPUT MODULES OF CREATING STITCHING DATA

Caution: By removing the presser bar lifting in pattern data input, data can be input more accurately.

If  key is pressed, the needle will return to home position when it is at the UP position.


(If the needle is not at the UP position, it will not return to home position.)

5.1 BASIC INPUT METHODS

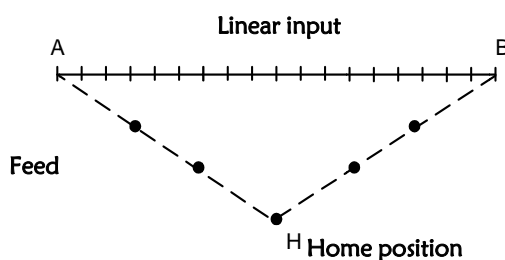
Key	Function	Explanations
	Feed	Feed function
	Point	The Point can be input one stitch at a time. (The distance between the points must be within 12.7mm.)
	Linear	2-point input: A linear line is created between the current position (already input) and the newly input point.
	Arc	3-point input: An arc, passing through the current position (already input) and two newly input points is created.
	Circle	3-point input: A circle, passing through the current position (already input) and two newly input points is created.
	Broken line	A broken line connecting the current position (already input) and the input point (up to 63 points possible) is created.
	Curve	A curve passing through the current position (already input) and the input point (up to 127 points possible) is created.

5.1.1 LINEAR INPUT


[Operation points]

- 1) Designate linear input ().
- 2) Input two points: A linear line is created between the current position (already input) and the newly input point.



[Example] The following type of pattern data will be created.



[Operation details]


- ① Press  key on the main menu screen



- Press  and  on the menu screen. The stitch length and speed setting screen will open.


- ② Setting stitch length and speed




- Use numeric key to input the stitch length, and press  key to set. (The distance between needles must be within 0.1mm~12.7mm).


-  Delete input

- Select speed.

 —Code H means high speed. Please set code H in user parameter.

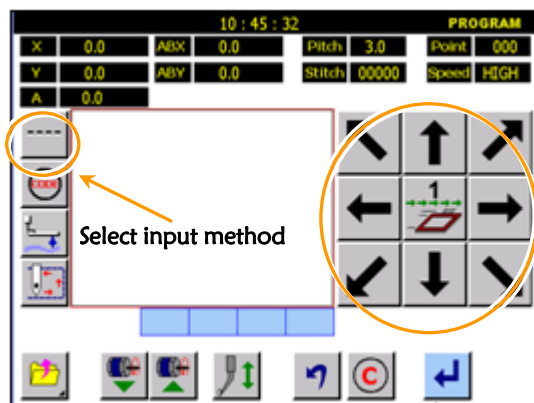
 —Code MD2 means middle-high speed.

 —Code MD1 means middle-low speed.

 —Code L means low speed.

(Code H is the default speed.)

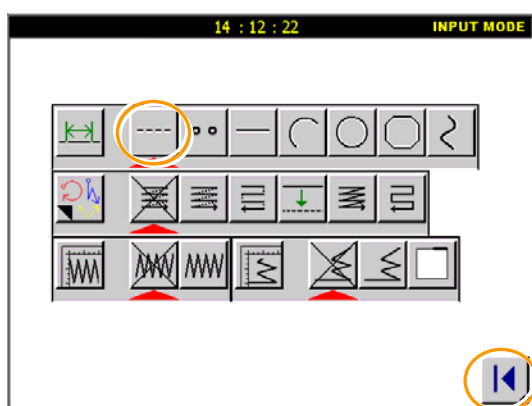
③ Setting feed modes



Pattern data drawing screen

- Press .
- When modify the stitch length, press to enter the stitch length setting screen.

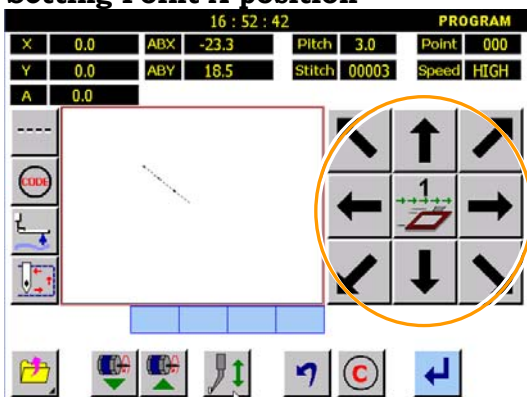
③ Switching input method setting



Pattern data setting screen

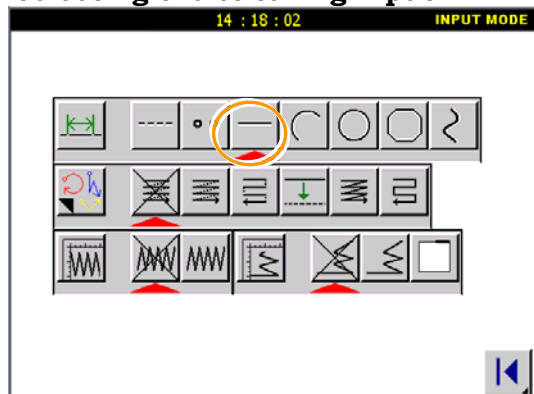
- Press key and select feed mode to input.
- When the key pointing to the feed input, press key to set and return to the pattern data drawing screen.

④ Setting Point A position



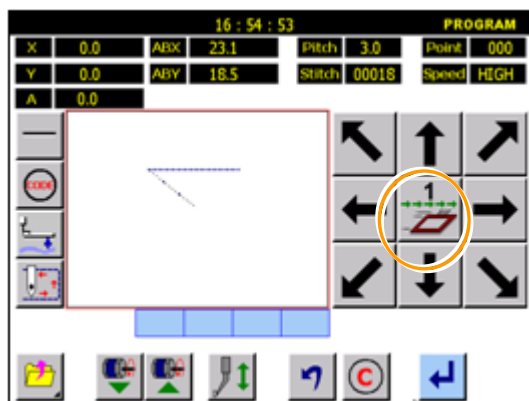
- Press the direction key s and move needle form home position (H) to Point A.
- Check the remove amount.
- Press key to set Point A.
- Press to enter input mode selecting screen.

⑤ Selecting the stitching input



- Press to select linear input.
- When the key pointing to the linear input, press key to return to the pattern data drawing screen.

⑥ Inputting stitching from Point A to Point B




- Press  key to set the creating speed:

 — Creating speed 1

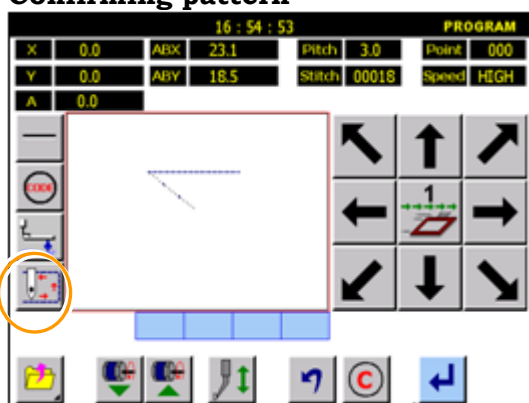
 — Creating speed 2


 — Creating speed 3

(Set creating speed in user parameter.)

- Press the direction keys and move needle from Point A to Point B.
- Press  key to set Point B.




⑦ Confirming pattern



- After set Point B without storing the pattern data, press the  key and enter the pattern data confirming screen.

⑧ Pattern confirming screen





- Press   key to confirm needle movement positions.
- After confirming, press  key to close the confirming screen and return to creating screen.

Caution: When returning to the creating screen, the needle returns to the last input point at the same time. (Point B)

⑩ Storing pattern data





- If the data is correct, press the  key on pattern data drawing screen and open the data number input screen. (As shown on the below screen)

- If the data is wrong, press  key and return to the main menu for recreating, or store the data at first, then enter the modifying module to modify. (Refer to section [6] pattern data modification.)


⑨ Running pattern data



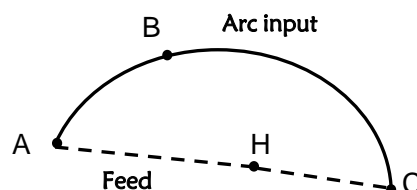
- Press  key to return to zero.
- Press  key, and the sewing machine carries out the jogging. Press the figure display area or trample the operation switch to operate the pattern data automatically.

5.1.2 ARC INPUT

[Operation Points]

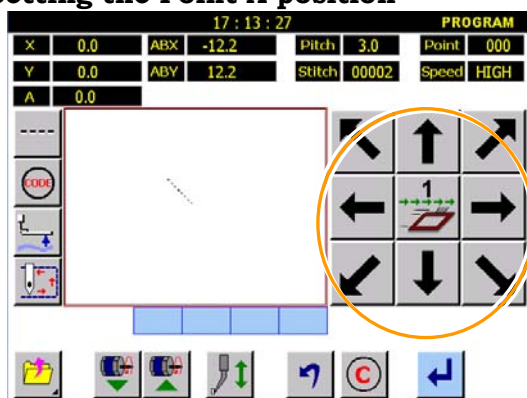
- 1) Set arc input. ()
- 2) Input three points (An arc, passing through the current position (already input) and two newly input points, is created.)


[Example] The following type of pattern data will be created.



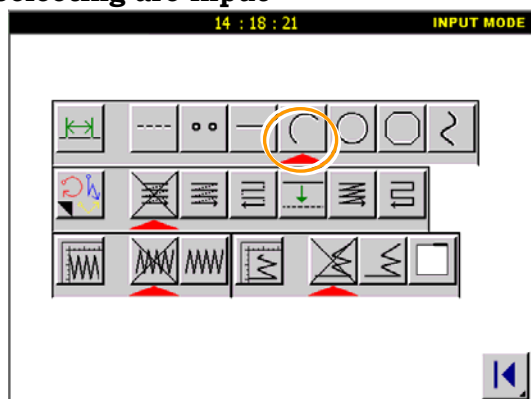
[Operation details]




- ①~④ steps are the same as the linear input. Please refer to Linear input.
- ⑤ Setting the Point A position



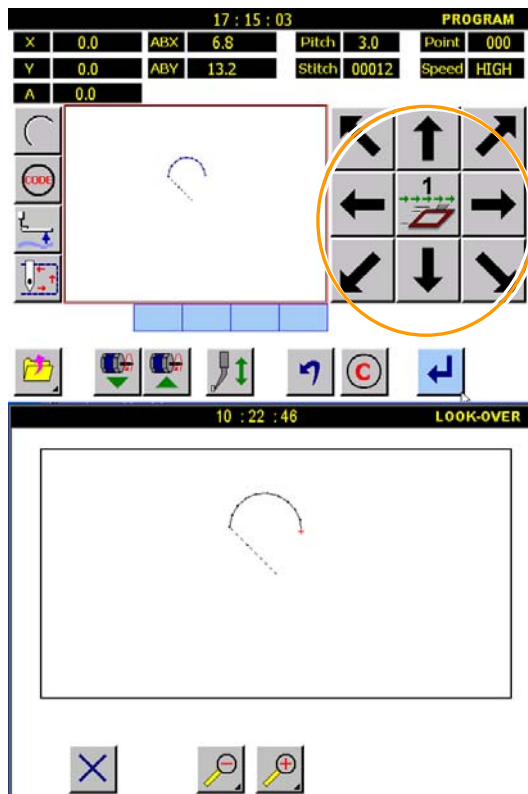
- Press the direction key s and move needle form home position (H) to Point A.
- Check the remove amount.
- Press  key to set Point A.

- ⑥ Selecting arc input



- Press  key to input.
- When the  key pointing to the arc input,  key is pressed to set and return to the pattern data drawing screen.

- ⑨ Inputting stitching from Point A to Point B




- Press the direction keys to remove needle from Point A to Point B.

- Confirm the remove amount.

- Press  key to determine Point B.

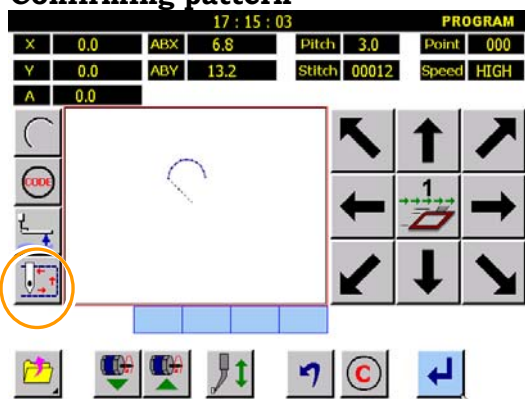
- Press the direction key to remove needle from Point B to Point C.


- Press  key to set Point C input.

- Press  key to confirm the drawing arc.

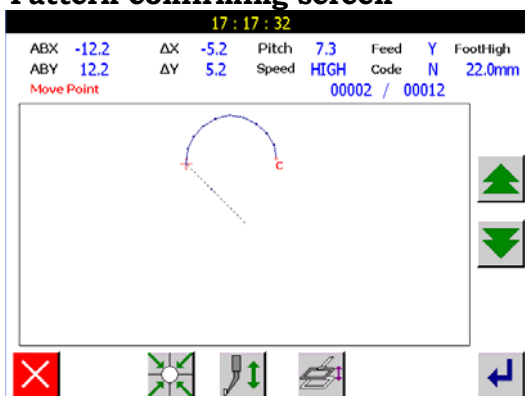
After setting, the system will return to the pattern data drawing screen.



⑩ Confirming pattern




- After setting Point C without storing the pattern data, press the  key and enter the pattern data confirming screen.

□ Pattern confirming screen



- Press   key to confirm the needle movement positions.

- After confirming, press  key to close the confirming screen and return to creating screen.

Caution: When returning to the creating screen, the needle returns to the last input point at the same time. (Point C)

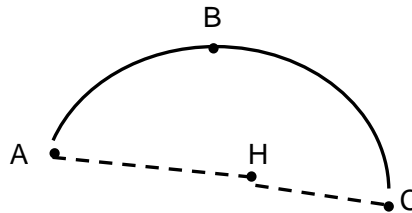
(II) Storing pattern data

Memo:

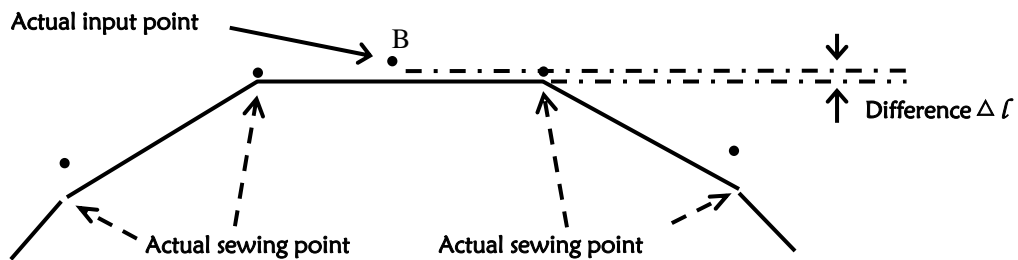
(1) "The three points confirm circle" should be obeyed by arc input rule, or the system will operate linear input.

(2) The difference explanation of input point and actual stitch length figure is based on <arc input> or <circle input>.

For instance, when made the 15mm half circle data, it likes the below figure.



The data is made according to the specified stitch length; it is not matched that sewing point and input point (B). There is difference (Δl) of the figure below because the value is calculated with the sewing point.



5.1.3 CIRCLE INPUT

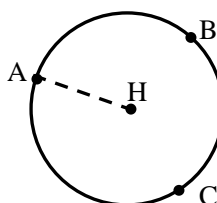
[Operation Points]

1) Set arc input ().

2) Input three Points (A circle, passing through the current position (already input) and two newly input points, is created.)

WARNING: When circle data is created, the needle returns to the circle home position. Care stitch position in avoiding hand harm or danger.

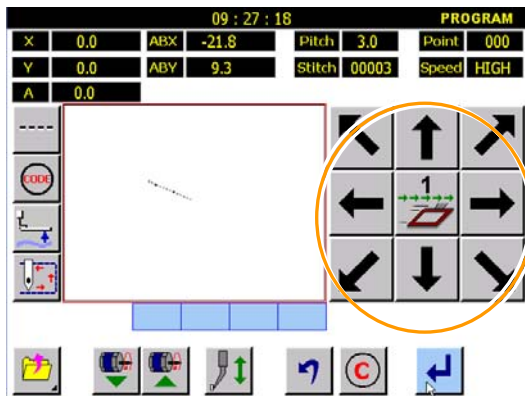
[Example] The following type of pattern data will be created.




[Operation details]

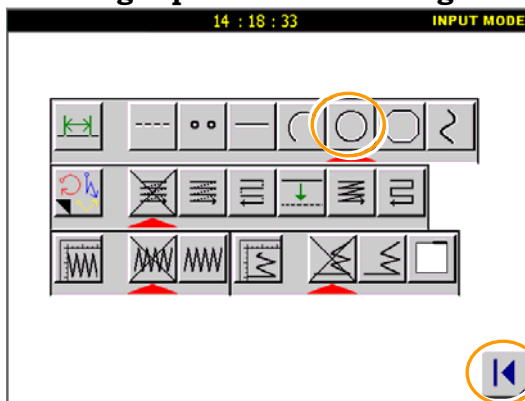
①~④ steps are the same as the linear input. Please refer to Linear input.





⑤ Setting Point A position



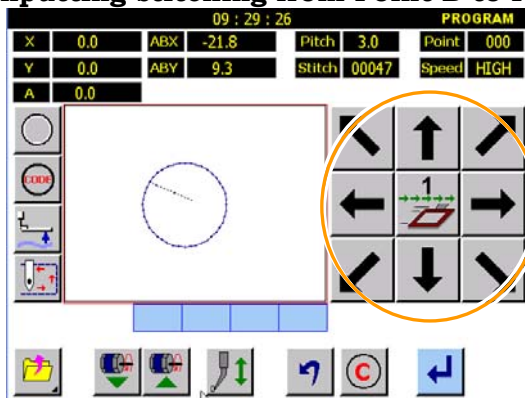
- Press the direction keys and move needle from home position (H) to Point A.
- Check the remove amount.
- Press  key to set Point A.


⑥ Switching input method setting



- Press  key to enter the pattern setting screen. Select  key to input.
- When the  key pointing to the arc input,  key is pressed to set and return to the pattern data drawing screen.

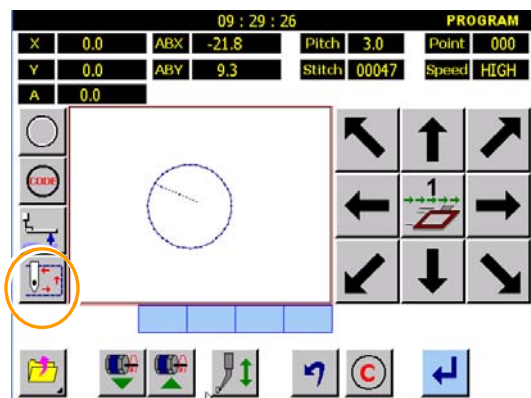
⑦ Inputting stitching from Point B to Point C




- Press the direction key to remove needle from Point A to Point B.
- Confirm the Remove amount.
- Press  key to set Point B.
- Press the direction key to remove needle from Point B to Point C.
- When set Point C, the stitches removes to Point A automatically to realize circle input.

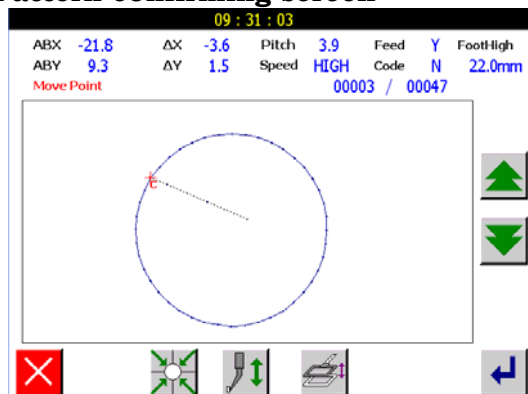
When set Point C, the stitch returns to the Point A. Care stitch positin in avoiding hand harm or danger.




⑧ Confirming pattern



- Press the  key and enter the pattern data confirming screen.

⑨ Pattern confirming screen





- Press   key to confirm the needle movement positions.
- After confirming, press  key to close the confirming screen and return to creating screen.

⑩ Storing pattern data

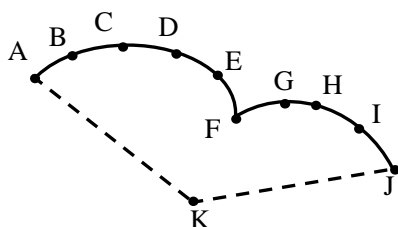
Caution: “The three points confirm circle” should be obeyed by arc input rule, or the system will operate linear input.




5.1.4 CURVE INPUT

[Operation points]

- 1) Set curve input ().
- 2) Up to 127 points can be input (A curve, passing through the current position and the input points, is created.)
- 3) Press . A delimiter point can be inserted at a pointed corner to continuously input the curve.
- 4) **Caution:** The delimiter point is the start point of the new curve.
- 5) When input curve, Returning to home position key is unavailable to avoid input error.

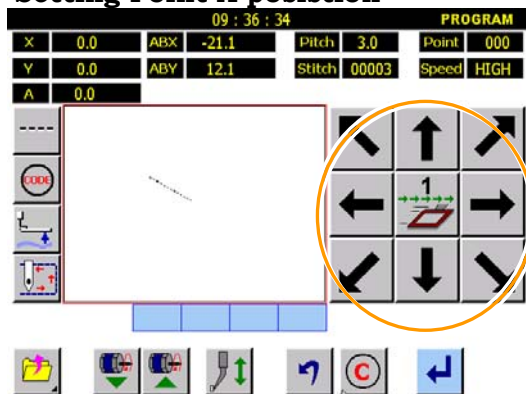
[Example] The following type of pattern data will be created.





Analysis: The above pattern consists of 2 curves. Point F is the delimiter point. Press  to set Point A, Point B, Point C, Point D, and Point E. Press  to set Point F, and press  to set Point F as a delimiter point as the end of the curve input.

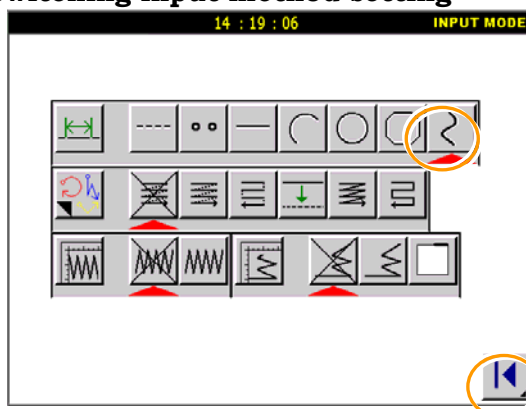
[Operation details]





① Setting Point A position




- Press the direction key  and move needle from home position (H) to Point A.
- Check the remove amount.
- Press  key to set Point A.

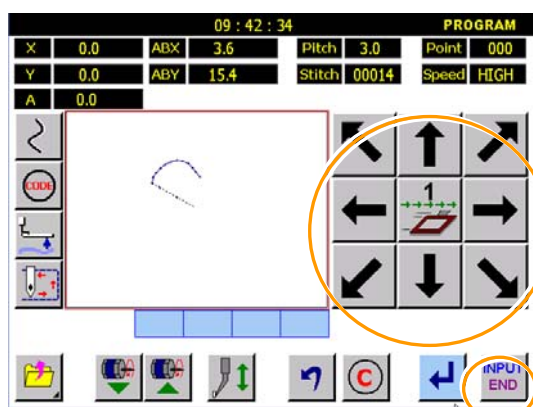
② Switching input method setting









- Press  key to enter the pattern setting screen.
- Select  key to input.
- When the  key pointing to the curve input,  key is pressed and return to the pattern data drawing screen.

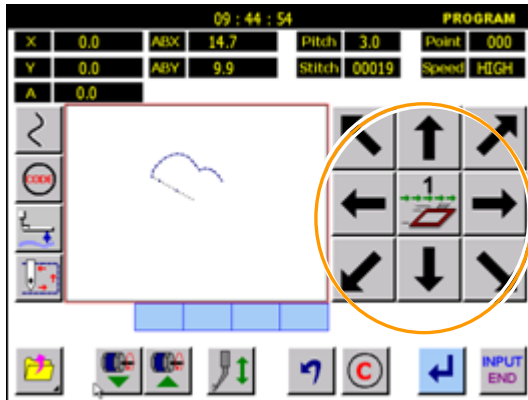
Caution: Because the curve input is different from the other inputs. Therefore,  key is added on curve data drawing screen to ensure the input end.

③ Inputting stitching from Point B to Point F



- Press the direction key  and move needle from Point A to Point B.
- Confirm the remove amount.
- Press  key to set Point B.
- Press the direction key  to remove needle from Point B to Point C.
- Press  key to set Point C.
- Press the direction key  to remove needle from Point C to Point D, E and F.
- After inputting Point F, press  key to set the curve input end. Because system can not correctly deal with the delimiter point.

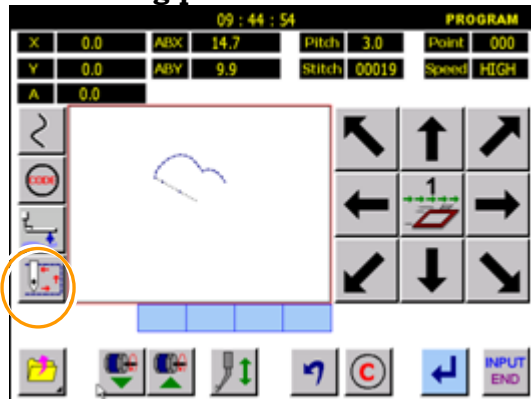
④ Inputting stitching from Point F to Point J



- Press the direction key **s** and move needle from Point F to Point G.
- Confirm the remove amount.
- Press key to set Point G.
- Press the direction key **t** to remove needle from Point G to Point H.
- Press key to set Point H.
- Press the direction key **u** to remove needle from Point H to Point I and J.
- Press key to set Point J.
- Press **INPUT** **END** key to set the curve input.

Caution: Press **INPUT** **END** to confirm the end of curve input. Then the pattern will be displayed on the screen.

⑤ Confirming pattern



- After set Point J without storing the pattern data, press the key and enter the pattern data confirming screen.


⑥ Pattern confirming screen



- Press key to confirm needle movement positions.
- After confirming, press key to close the confirming screen and return to creating screen.

Caution: When returning to the creating screen, the needle returns to the last input point at the same time. (Point J)

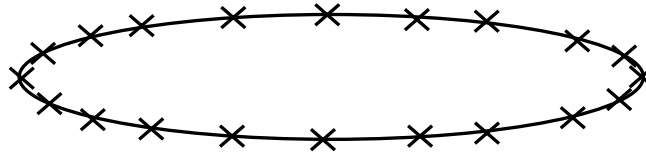
⑦ Storing pattern data

Caution: If the distance between the curve start point and the end point is less than 0.5 mm, the pattern will be closed pattern automatically. Press  key twice at the same point is regarded as the invalid operation.

Keys for curve input

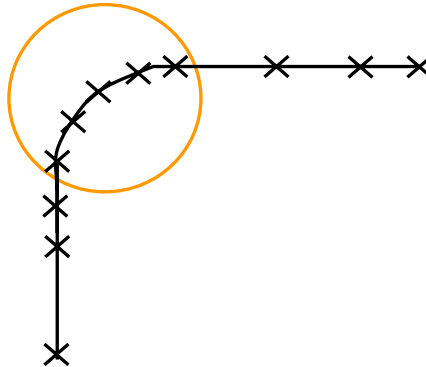
1. Ellipse input

For shape data as shown below, except peak, in each quadrant five or more points are inputted.

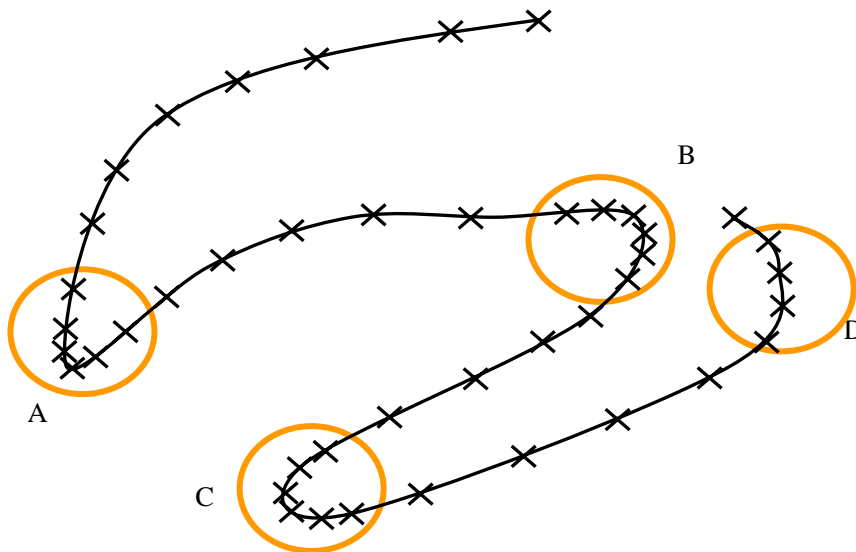


2. Curve

Pay attention to the following situations. If the curve rate changes variably, more points need to input. For shape data (linear line+ arc) as shown below, at least input five points in delimiter point.



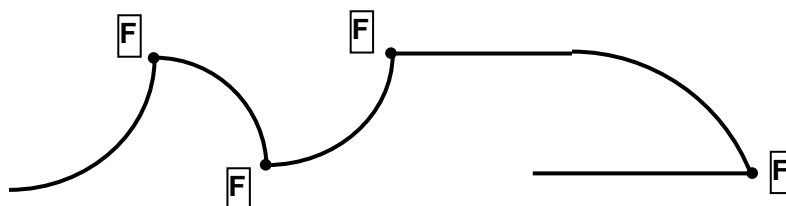
3. Arbitrary curve



If the curve rate changes variably, as Point A/B/C shown above, input points as many as possible (more than five Points); if the curve rate is steady (Point D), input less points.


For the curve drawing precision, input points as many as possible in proper conditions.

4. For shape data as shown below, continuous curve input is possible by selecting a delimiter point where the corner is pointed (Point F).

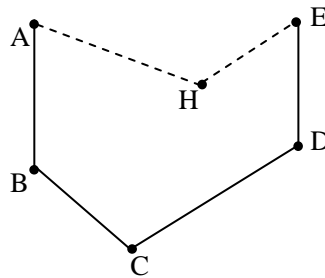


5.1.5 BROKEN LINE INPUT

[Operation points]

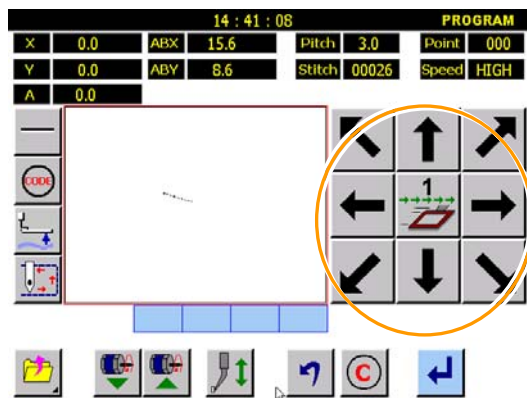
- 1) Set broken line input ().
- 2) Up to 127 points can be input (A broken line connecting the current position and input points is created.)
- 3) When input broken line, returning to home position key is unavailable.


[Example] The following type of pattern data will be created.



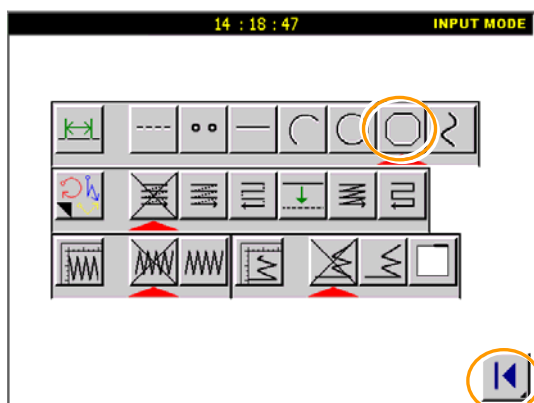
[Operation details]





① Setting Point A position



- Press the direction keys and move needle from home position (H) to Point A.
- Check the remove amount.
- Press  key to set Point A.

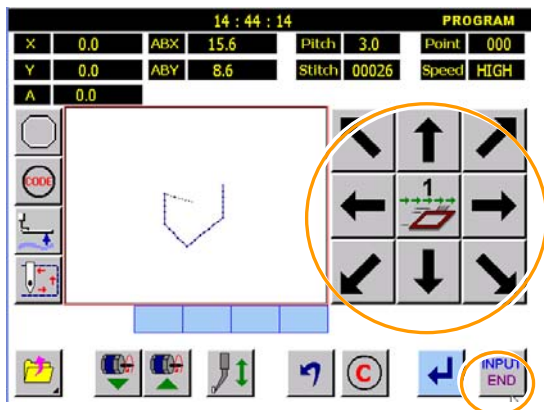
② Switching input method setting












- Press  key to enter the pattern setting screen. Select  key to input.
- When the  key pointing to the curve input,  key is pressed and return to the pattern data drawing screen.

Caution: Because the curve input is different from another kinds of input, therefore add  on curve creating screen to ensure the end of curve input.

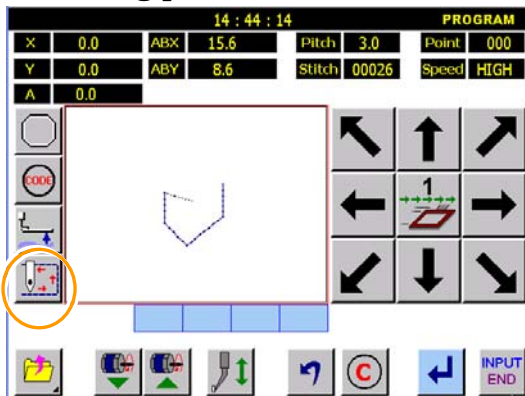
③ Inputting stitching from point B to Point E




- Press the direction keys and move needle from Point A to Point B.
- Press  key to set Point B.
- Press the direction keys to remove needle from Point B to Point C.
- Press  key to set Point C.
- Press the direction keys to remove needle from Point C to Point D.
- Press  key to set Point D.
- Press the direction keys to remove needle from Point D to Point E.
- Press  key to set Point E. It is the end point of the pattern. Then, press the  key again to set the pattern.

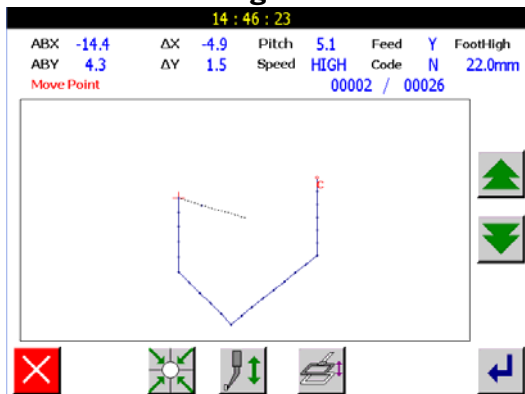
Caution: Polygon input is similar with the curve input. Press  to set common points. When set end point, press  and  to confirm the end of polygon input. When end of polygon input, press  to see the creating pattern.




④ Confirming pattern



- After set Point E without storing the pattern data, press the  key and enter the pattern data confirming screen.

⑤ Pattern confirming screen




- Press   key to confirm the needle movement positions.
- After confirming, press  key to close the confirming screen and return to creating screen.

Caution: When returning to the creating screen, the needle returns to the last input point at the same time. (Point E)

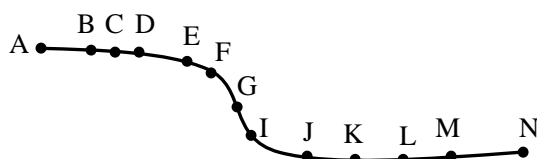
⑥ Storing pattern data

5.1.6 POINT INPUT

[Operation points]

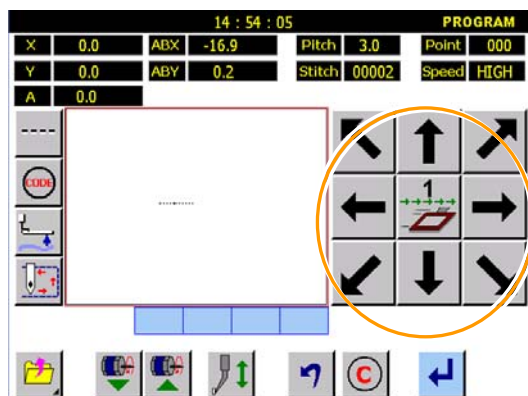
1) Set Point E input ().


[Example] The following type of pattern data will be created.



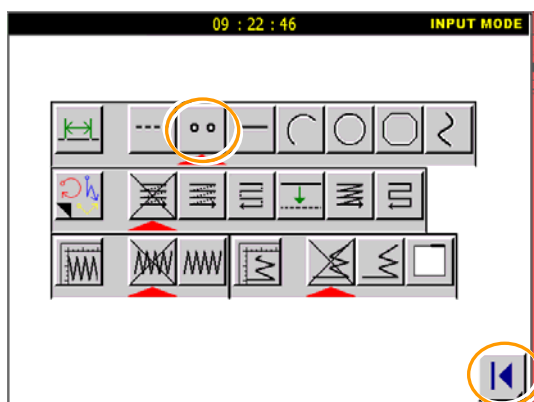
[Operation details]





① Setting Point A position



- Press the direction keys and move needle form home position (H) to Point A.
- Check the remove amount.
- Press  key to set Point A.

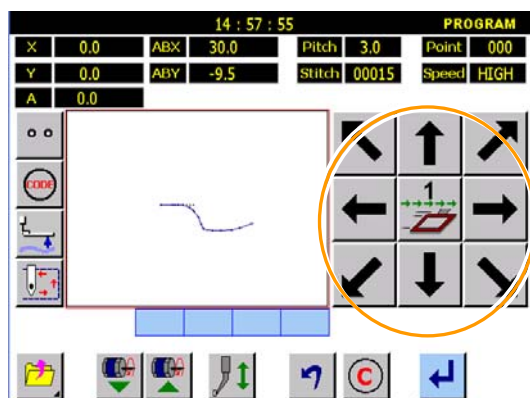
② Switching input method setting








- Press  key to enter the pattern setting screen. Select  key to input.
- When the  key pointing to the curve input, press  key to set and return to the pattern data drawing screen.

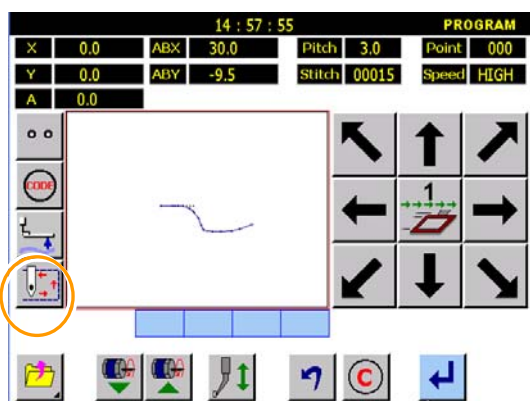
Memo: The distance between the points must be within 12.7mm.


③ Inputting stitching from point B to Point N



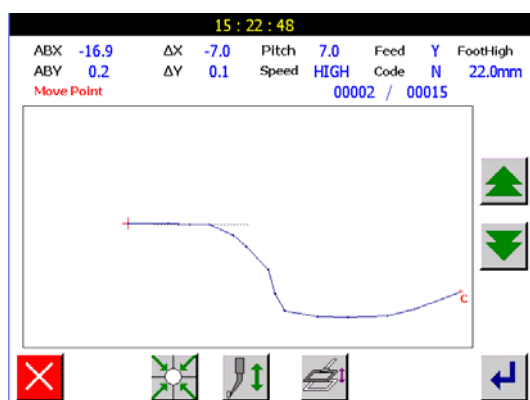
- Press the direction key  and move needle from Point A to Point B.
- Press  key to set Point B.
- Press the direction key  to remove needle from Point B to Point C.
- Press  key to set Point C.
- Input point from C to N separately in the same manner as shown above.
- Press  key to confirm pattern, then return to pattern data drawing screen after confirming.




④ Confirming pattern



- After set Point N without storing the pattern data, press the  key and enter the pattern data confirming screen.

⑤ Pattern confirming screen



- Press   key, so the needle movement positions can be confirmed.
- After confirming, press  key to close the confirming screen and return to creating screen.

Caution: When returning to the creating screen, the needle returns to the last input point at the same time. (Point N)

⑥ Storing pattern data

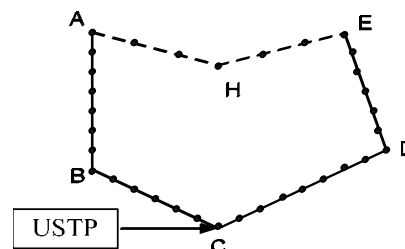
5.1.7 CODE DATA INPUT

[Operation points]

- 1) Designate code data input ().
- 2) Select code data according to the below list.

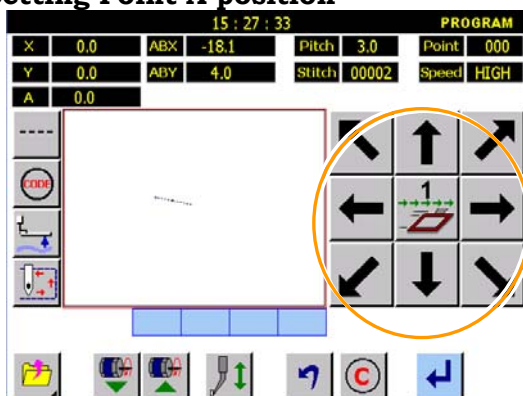
Code abbr.	Function
TRIM	Thread trimming
USTP	Needle UP halt
DSTP	Needle DOWN halt
2HP	2nd home position
BAT	Basting



[Example]: As the following type of pattern data, insert <USTP> between two straight lines.



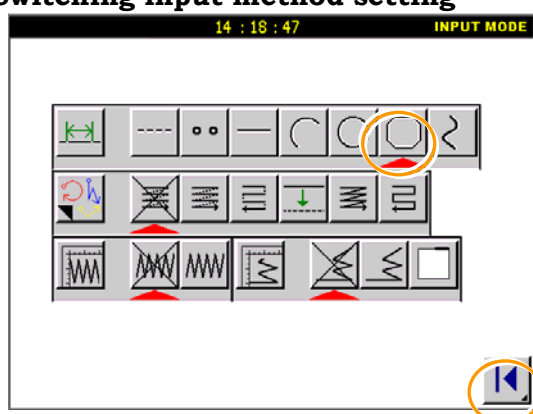
[Operation details]





① Setting Point A position



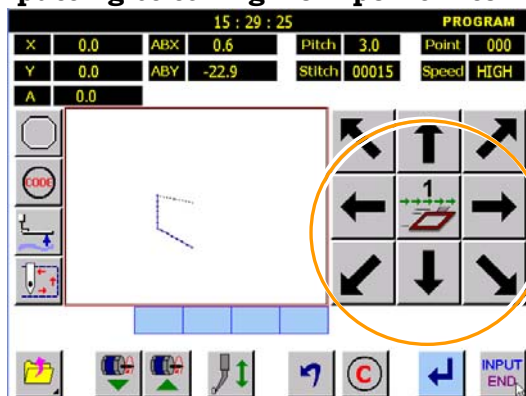
- Press the direction key  and move needle from home position (H) to Point A.
- Check the remove amount.
- Press  key to set Point A.

② Switching input method setting



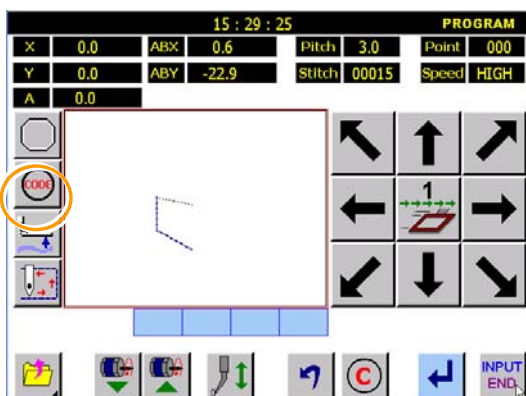
- Press  key to enter the pattern setting screen. Select  key to input.
- When the  key pointing to the curve input,  key is pressed to set e and return to the pattern data drawing screen.

③ Inputting stitching from point B to Point C



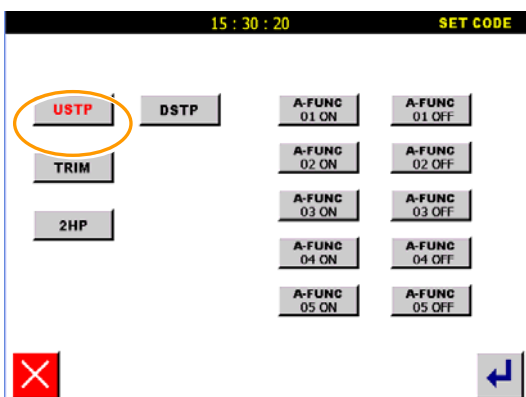
- Press the direction key and move needle from Point A to Point B.
- Confirm remove amount.
- Press key to set Point B.
- Press the direction key to remove needle from Point B to Point C.
- Press key to set Point C.

④ Inputting the code data at the Point C (USTP)



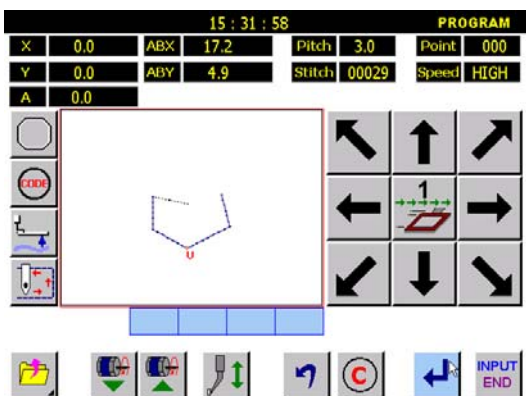
- When needle stops at Point C, code data is inputted and the key is pressed

⑤ Selecting USTP



- Press key.
 - Press to set the code. (The "NEEDLE UP HALT" code will be created.)
- The system will return to the arrow input screen.

⑥ Inputting a linear line from Point C to Point D and from Point D to Point E











- Press the direction key and move needle from Point C to Point D.
- Confirm the remove amount.
- Press key to set Point D.
- Press the direction key to remove needle from Point D to Point E.
- Press key to set Point E.

⑦ Storing pattern data

5.2 APPLICATION INPUT

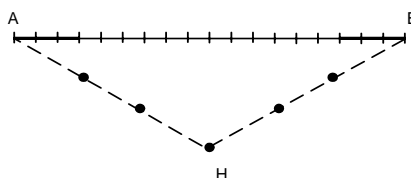
Various types of stitching, including start/end back tacking, terminal reinforcing, multiple stitching, offset stitching and zigzag stitching can be inputted. Various types of stitching data can be created easily by combining the basic inputs and these types.

Caution: The back tacking, multiple stitching, offset stitching and zigzag stitching input cannot be combined with point inputs to input data.

Function	Explanations
Back tacking	 Start/end back tacking
	 Overlap back tacking
Multiple stitching	 Multiple stitching (Feed data specifications)
	 Multiple stitching (stitching specifications)
	 Reverse multiple stitching (feed data specifications)
	 Reverse multiple stitching (stitching specifications)
Offset stitching	
Zigzag stitching	

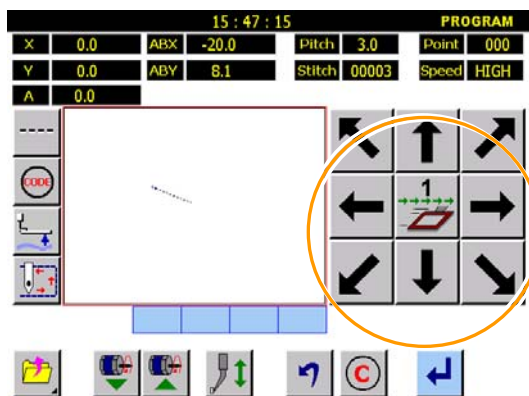
5.2.1 BACK TACKING (START/END BACK TACKING)



[Example] With the linear input, the N mode and 3-stitch back tacking will be inserted for both the start and end of stitching. (The bold sections indicate start/end back tacking.)



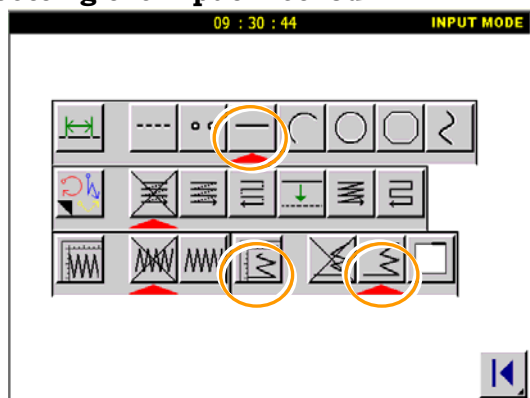
[Operation details]

① Setting Point A position



- Press the direction key  and move needle form home position (H) to Point A.
- Check the remove amount.
- Press  key to set Point A.

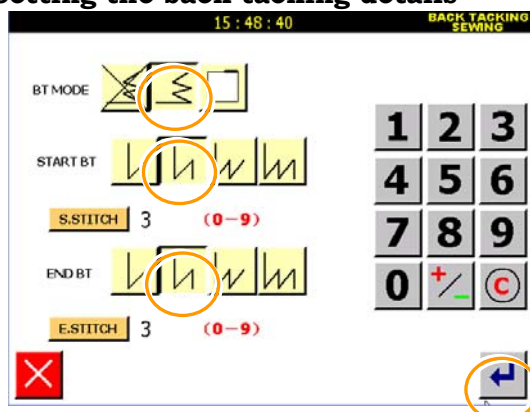
② Setting the input method



- Set the feed data from the home position to the point A with the procedures for linear input, and open the input method setting screen.

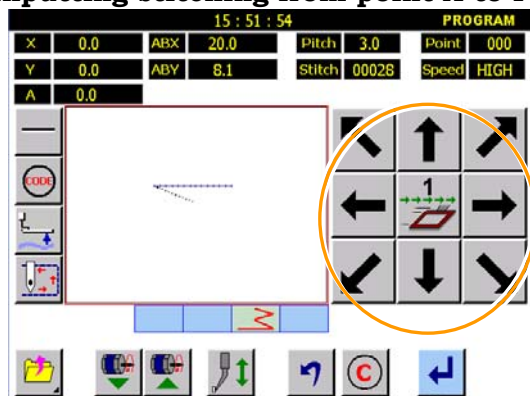
- Press linear input
- Press back tacking
- Press the back tacking details setting key

③ Setting the back tacking details



- The details are set on this screen.
The details set here are (start/end back tacking), start key (N mode). Press **S.STITCH** key to set start stitch, and use numeric key to set three start stitches.
- Start key (N mode), press **E.STITCH** key and use numeric key to set three end stitches.
- Press
- Return to input method setting screen.
- Press

④ Inputting stitching from point A to Point B



- Press the direction key s and move needle form Point A to Point B.
- Confirm the remove amount.
- Press key to set Point B.

⑦ Saving pattern data

Memo:

1) Regarding back tacking mode

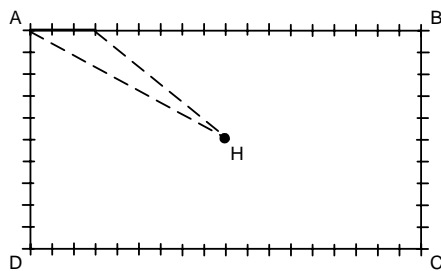
- V mode: Back tacking will be performed only once.
- N mode: Back tacking will be performed twice.
- M mode: Back tacking will be performed third.
- N mode: Back tacking will be performed fourth.

2) Regarding number of stitches

Press the **S.STITCH** key or **E.STITCH** key, and use numeric key to input back tacking stitches.

5.2.2 BACK TACKING (OVERLAP BACK TACKING)

[Example] The following type of pattern data will be created.

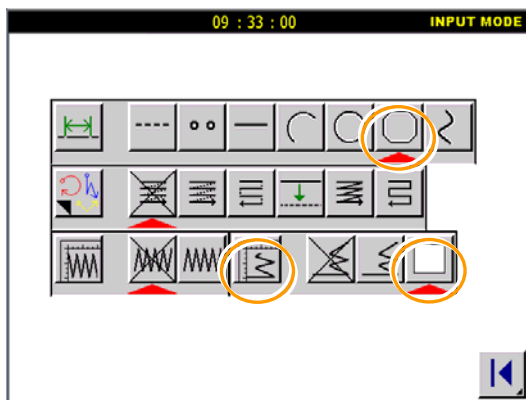





Input a rectangle as a broken line, and then insert overlap back tacking at the end. (The overlap mode is entered once; three overlap stitches are made.)

Caution: It is a shutting figure in the figure made in [Broken line], [Circle], [Arc], [Curve] to be able to do multiple back tacking.

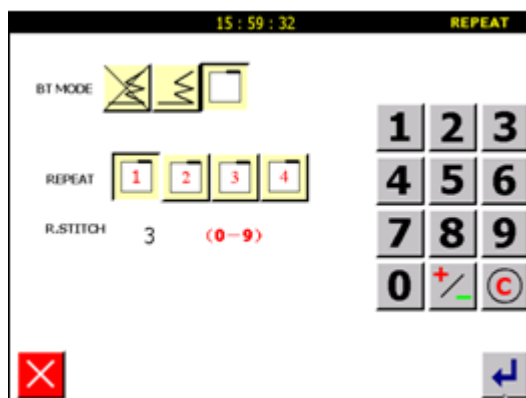
[Operation details]





- ① Setting Point A position
- ② Setting the input method



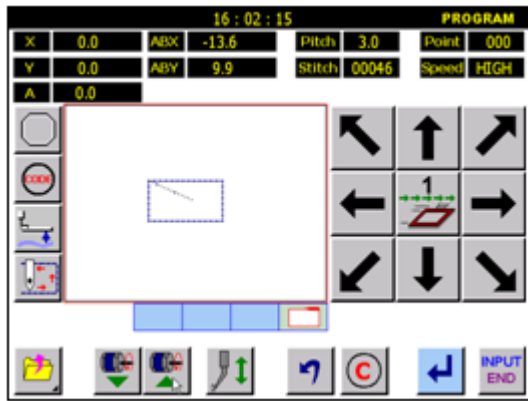
- Set the feed data from the home position to the Point A with the procedures for broken line input, and open the Input Method Setting screen.
- Press broken Line Input .
- Press overlap back tacking .
- Press the back tacking details setting key .







③ Setting the multiple back tacking details



- The details are set on this screen.
The details set here are,  (overlap back tacking), overlap mode , three overlap stitches.
- Press  to set.
- The system will return to the input method setting screen.
- Press  to determine these set values.
- The system will return to the pattern data drawing screen.

④ Inputting stitching from point B to Point D



- Press the direction key  and move needle from Point A to Point B.
- Press  key to set Point B.
- Press the direction key  to remove needle from Point B to Point C.
- Press  key to set Point C.
- Press the direction key  to remove needle from Point C to Point D.
- Press  key to set Point D.

⑤ Saving pattern data

Caution:

1) The number of overlapped sections


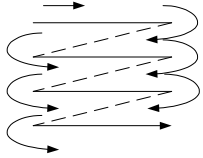

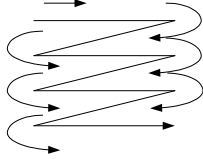

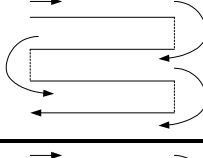

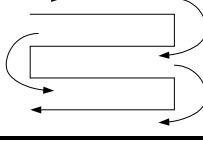


in the overlap mode indicate the number of overlapped sections.

2) Number of overlap stitches

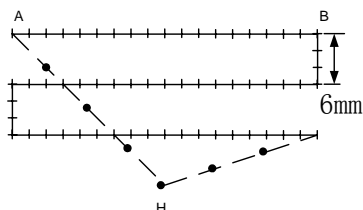
This is the number of stitches at the overlapped section. (Set a value between 0 and 9.)

5.2.3 MULTIPLE STITCHING

Type	Mode	Key	Stitching data image	Explanations
Multiple	Feed data			"Stitching" in a set direction is disconnected with "feed without stitching".
	Stitching			"Stitching" in a set direction is connected with "stitching".
Reverse multiple	Feed data			"Stitching" in alternating reverse directions is connected with "feed data".
	Stitching			"Stitching" in alternating reverse directions is connected with "stitching".

Caution: (.....) in the image indicates "feed data". (———) in the image indicates "stitching".

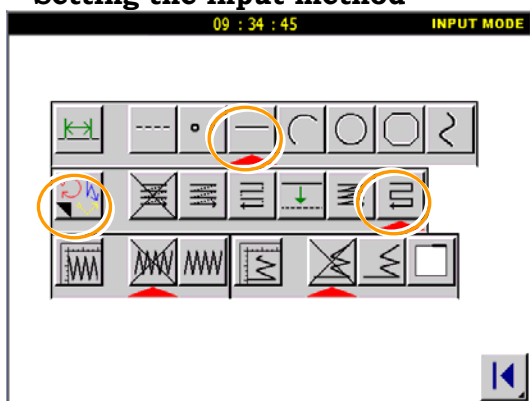
[Example] The following type of pattern data will be created.






Create the linear reverse multiple (stitching specification) data. (The multiple distance is 6mm, the number of times is three, the direction is right.)

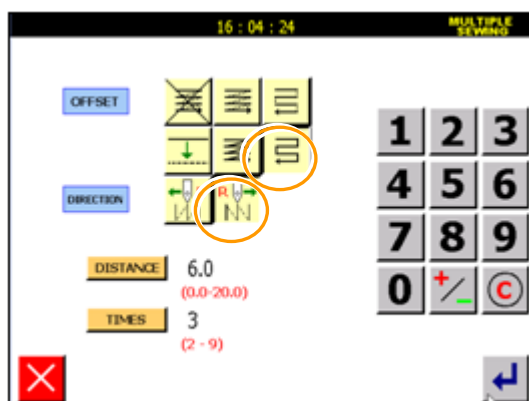
[Operation details]







- ① Setting the Point A position
- ② Setting the input method



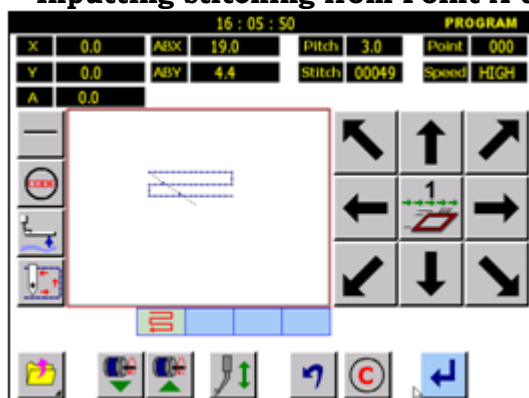
- Press linear input key 
- Press reverse multiple (stitching specifications) 
- Press the reverse multiple details key 
- Set the reverse multiple stitching details.

- ③ Setting the reverse multiple stitching details



- Select the multiple mode, and press  key (reverse multiple (sewing)). Select the multiple directions, and press  key (right side). Press  key, set the distance to 6.0 by using numeric key; press  key, set the number of times to 3 by using numeric key.
- After inputting the details, press  to set the data.
- Press  key screen to return to pattern data drawing screen.

- ④ Inputting stitching from Point A to Point B





- Press the direction key s and move needle form Point A to Point B.
- Confirm the remove amount.

⑤ Saving pattern data

Memo:

1) Direction

When creating multiple stitching to the left of the input stitching line, press  key (left side).

When creating multiple stitching to the right of the input stitching line, press  key (right side).

2) Distance

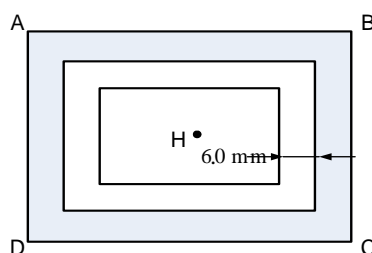
This is the distance between the multiple stitching and adjacent line. Set between 0.0mm and 20.0mm. To input the distance data, press the DISTANCE key, then use the numeric key.

3) Number of times

Set the number of multiple stitching layers. Set between 2 and 9. To input the number of times, press the DISTANCE key, then use the numeric key.

5.2.4 OFFSET STITCHING

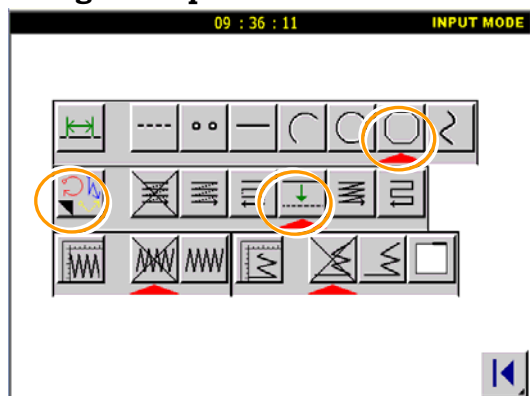
[Example] The following type of pattern data will be created. Input offset stitching with overlap back tacking as a broken line. (Set the offset distance to "6.0 mm", and direction to "right".)









[Operation details]

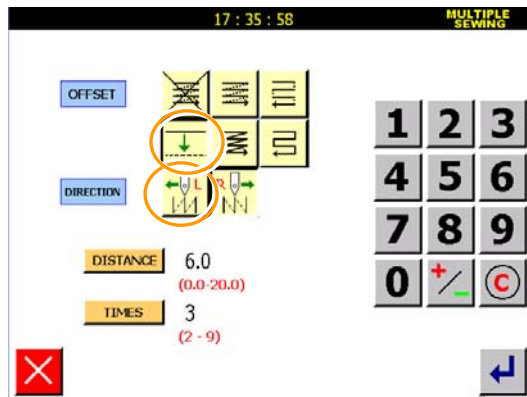
① Setting the Point A position

② Setting the input method



- Press  key to enter the pattern setting screen. Select  key to input.
- When the  key pointing to the curve input,  key is pressed and return to the pattern data drawing screen.
- Press  (offset stitching).
- Press the offset stitching details key .

③ Setting the offset details



- The details are set on this screen.

Press and . Press key, and use numeric key to set the distance to 6.0.

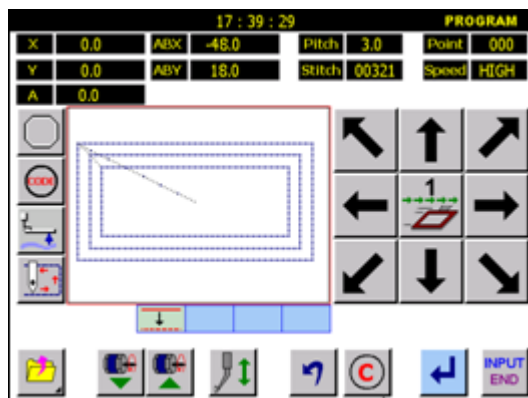
- After inputting the details, press to set the data.

- press key (left side)

press key (right side)

- Press key to return to input method setting screen

④ Pattern stitching



- Press the direction keys to remove needle from Point A to Point B.

- Press key to determine Point B.

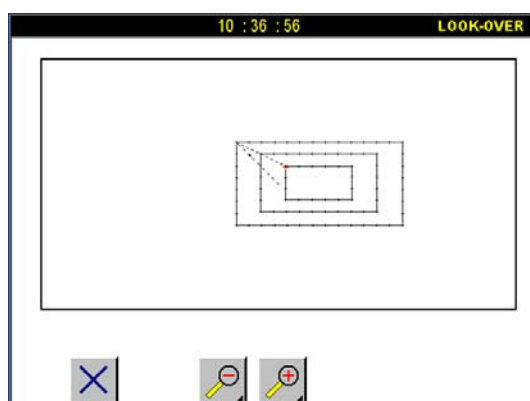
- Press the direction keys to remove needle from Point B to Point C.

- Press key to determine Point C.

- Press the direction keys to remove needle from Point C to Point D.

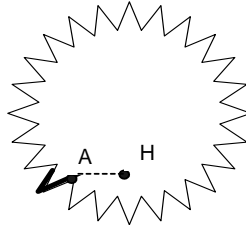
- Press key to set Point D. It is the end point of the pattern. Then, press the key again to set the pattern.

⑤ Confirming and saving pattern data



5.2.5 ZIGZAG STITCHING (WITH OVERLAP BACK TACKING)

[Example] The following type of pattern data will be created. Input zigzag stitching with overlap back tacking as circle. (The zigzag deflection width will be 5.0mm the feed amount (stitch length) will be 3.0mm, the direction is left, the overlap back tacking mode will be carried out once, and two overlap stitches will be made.)

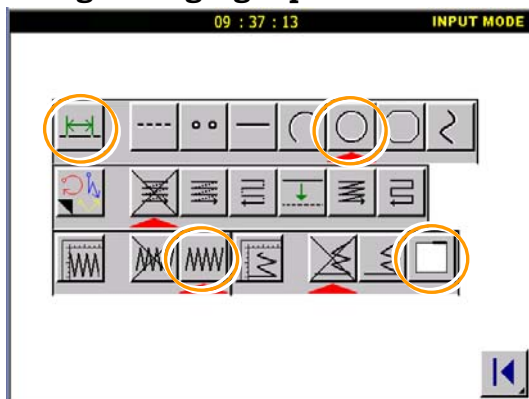


The bold section is the overlap back tacking section.

[Operation details]

① Setting the Point A position

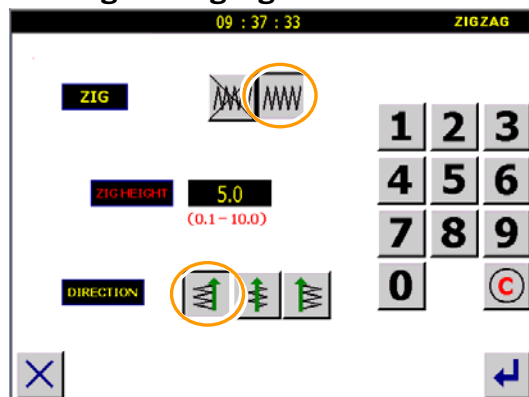
② Setting the zigzag input



- Set the feed data from the home position H to the point A with the procedures for broken line input, and open the input method setting screen.

- Press circle input key
- Press key to change the stitch length, enter the stitch length screen and use numeric key to input stitch length.
- Press zigzag key
- Set the application input details. Press

② Setting the zigzag details

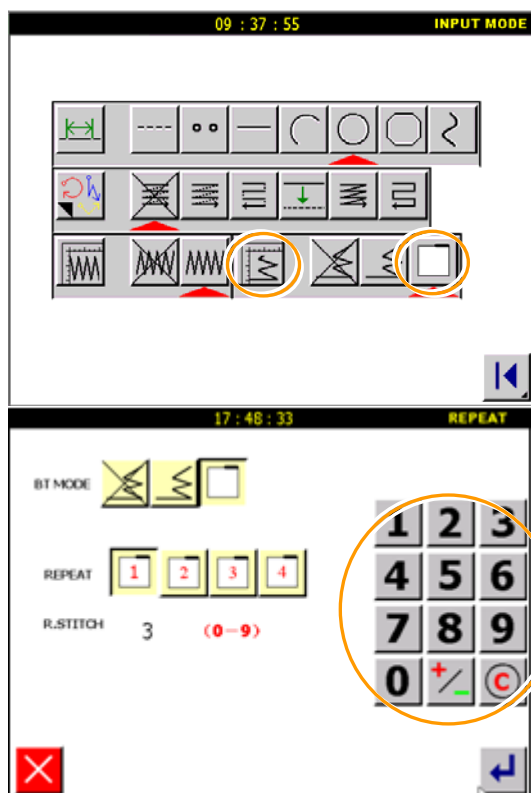


- The details are set on this screen.
Press (zigzag) key, and use numeric key to set the deflection width to 5.0.




Press key to set deflection direction (left side).

- After inputting the details, press to set the data.

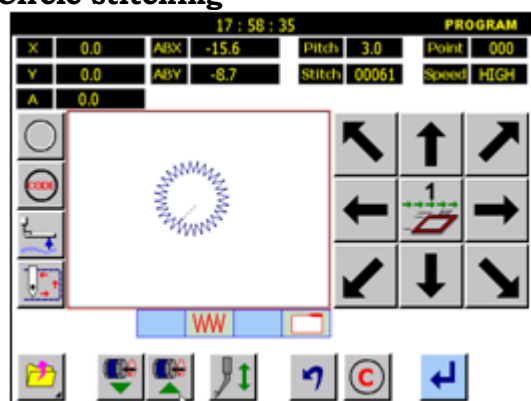
④ Setting the multiple back tacking details




- Press multiple back tacking key .
- Press .

- The details are set on this screen.
The details set here are, , overlap mode , two overlap stitches.
- After inputting the details, press  to set the data.

⑤ Circle stitching

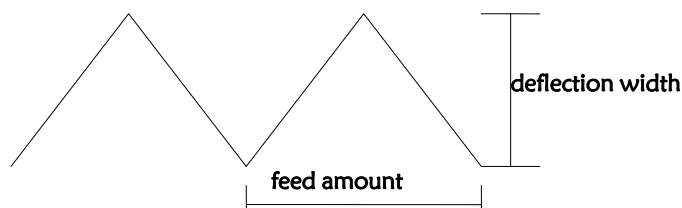


- Carry out circle stitching according to 5.1.3.
 - Press  key to confirm circle pattern.
- After confirming, return to pattern data drawing screen.

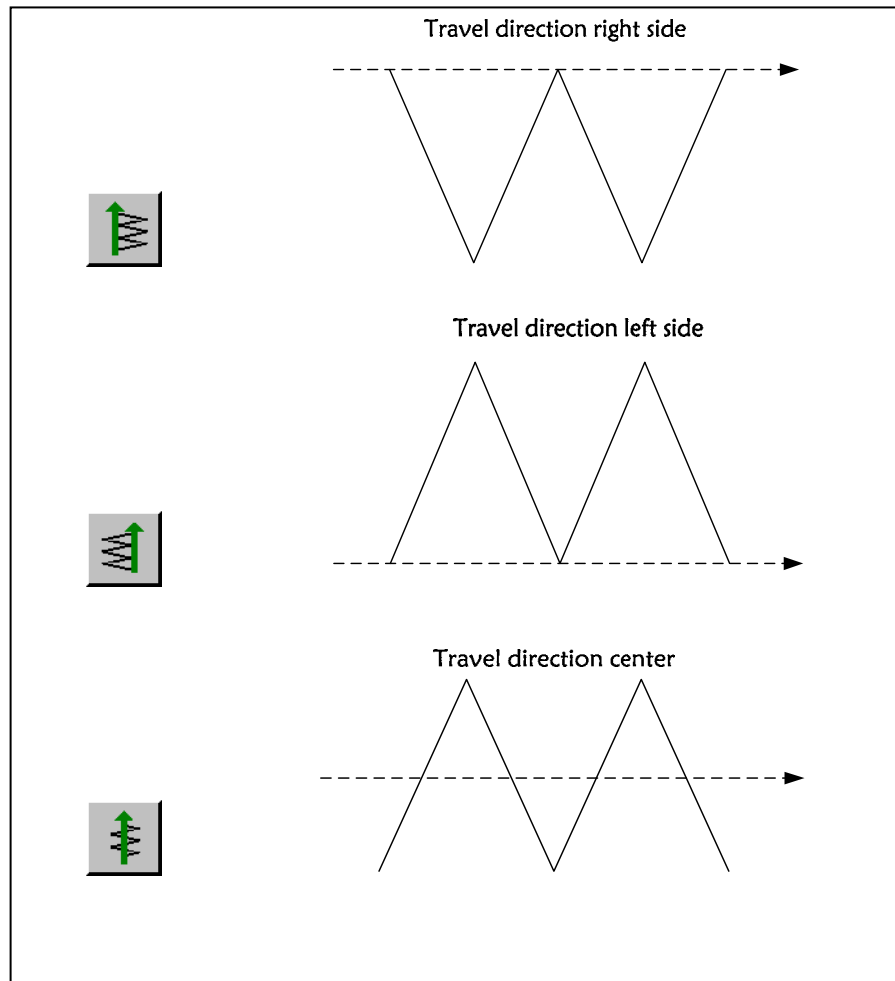
⑥ Saving pattern data


Memo:

- 1) The zigzag deflection width can be set in 0.1mm increments between 0.1 and 10.0mm.)
- 2) The zigzag feed amount can be set in 0.1mm increments between 0.5 and 10.0mm.)
- 3) Deflection width, feed amount and creation direction (feed amount= stitch length)



Direction:



When the direction of making is made "Center" , does not become a zigzag pattern data if "width of the shake" is 0.1mm. Please set "width of the shake" to 0.2mm or more, or whether to do the direction of making is other than "center".

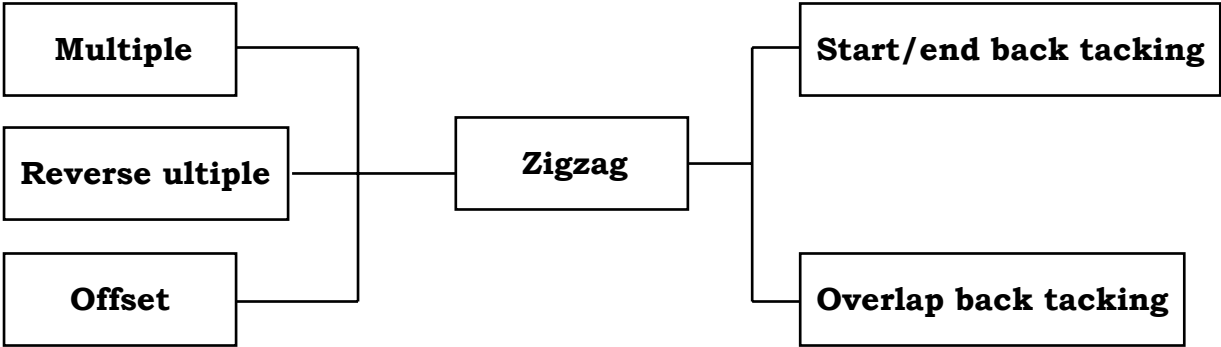
5.3 TABLE OF STITCHING TYPE COMBINATIONS

Basic input	Application input					
	Multiple	Reverse multiple	Offset	Zigzag	Start/end back tacking	Overlap back tacking
Linear	●					
		●				
			●			
				●		
					●	
						●
	●			●		
	●				●	
	●			●	●	
		●		●		
		●			●	
		●		●	●	
			●	●		
			●			
			●	●	●	
				●	●	
Arc	●					
		●				
			●			
				●		
					●	
	●			●		
	●				●	
	●			●	●	
		●		●		
		●			●	
		●		●	●	
			●	●		
			●		●	
			●	●	●	
				●	●	
Circle	●					
		●				
			●			
				●		
					●	
						●
	●			●		
	●				●	
	●					●
	●			●	●	
	●			●		●
		●		●		
		●			●	
		●				●
		●				
		●		●	●	

		●		●		●
			●	●		
			●		●	
			●			●
			●	●	●	
			●	●		●
				●	●	
				●		●
Curve	●					
		●				
			●			
				●		
					●	
						●
	●			●		
	●				●	
	●					●
	●			●	●	
	●			●		●
		●		●		
		●			●	
		●				●
		●		●	●	
		●		●		●
			●	●		
			●		●	
			●			●
			●	●	●	
			●	●		●
				●	●	
				●		●
Broken line	●					
		●				
			●			
				●		
					●	
						●
	●			●		
	●				●	
	●					●
	●			●	●	
	●			●		●
		●		●		
		●			●	
		●				●
		●		●	●	
		●		●		●
			●	●		
			●		●	
			●			●
				●	●	
						●
				●		
				●	●	
						●

			●	●		●
				●	●	
				●		●
Point	Combination inputs with application inputs are not possible.					



Combined pattern:


















6 PATTERN DATA MODIFICATION

Entering the modification mode



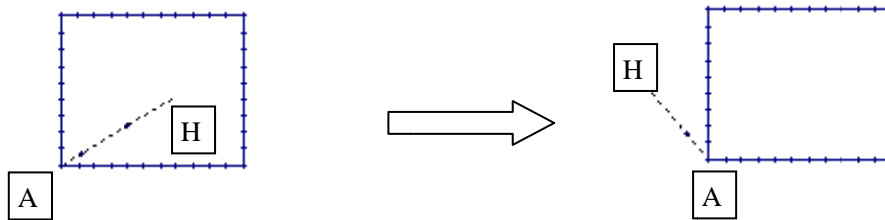
- Press  key and  key on the main menu screen to enter the modification function.

Main modification mode functions

	Function	Key	Details	Details setting
 stitch	Movement to stitching start position		The stitching start position moves.	
	Stitch addition		Data for one stitch is added at designated position	
	Delete		Deletes the designated stitch.	
	Stitch position modification		The position of the stitch is modified	 <After modification position> fixed  Relative movement
	Block movement		Data in a designated range is moved.	 <Prior/Subsequent data> Change  Add new stitch in between
	Block modification		The area between two points to be modified is modified with linear, broken line, arc, curve, zigzag or feed data.	
	Second home position modification		Only use in the pattern with the second home position.	
	Code		Code data is added to or deleted from designated stitch position.	 Add  Delete

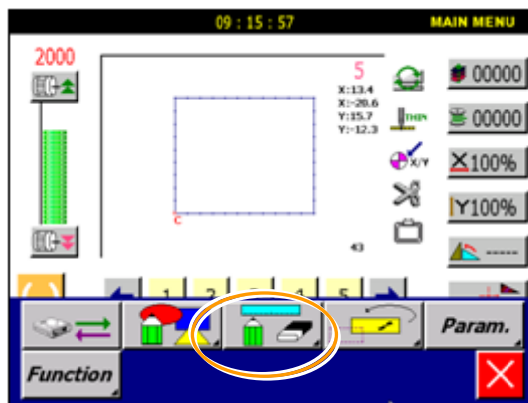
6.1 MODIFYING THE STITCHING START POSITION

[Example] The stitching start position Point A in the stitching data will be modified to the Point B as shown below.



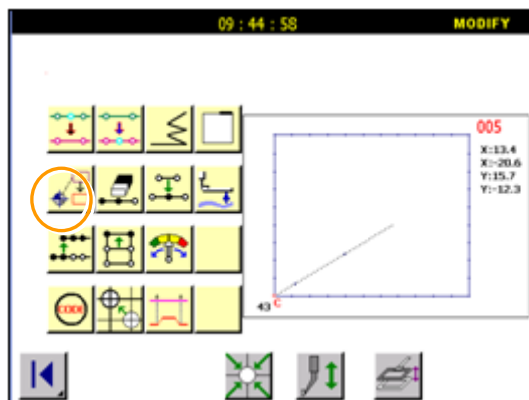
[Operation details]

① Entering the modification mode



- Press  and  on main menu screen to enter the modification mode.

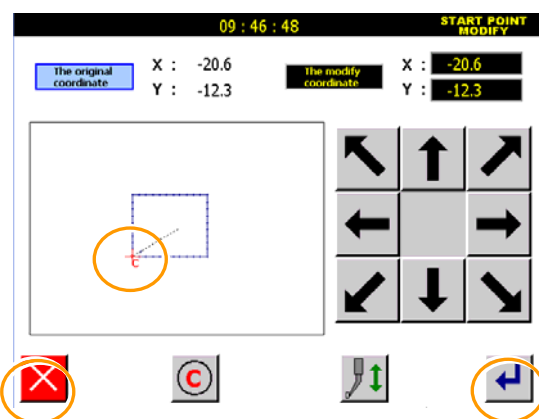
② Selecting the stitching start position direction key





- Press the stitching start position direction key .

Caution: The work holder will automatically move to the Point A stitching start position. Take care when the needle is lowered, etc.

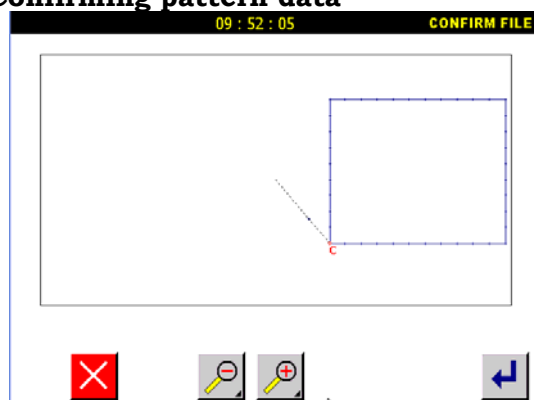
③ Moving to the modification position








- Press the direction key **s** to move the position to the point B.
- Press .
- If  is pressed before setting, the screen will change to the previous screen.

Caution: The work holder will automatically move to the home position. Take care when the needle is lowered, etc.

④ Confirming pattern data

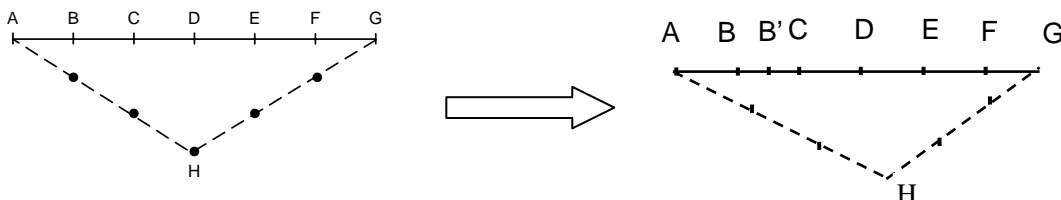


- Press  to set. Return to pattern data drawing screen. Press  key to return to modify start point again.
- Press  key or  key to reduce or amplify pattern.
- Before setting, When  is pressed, the modifications executed last will be undone.

Caution: If there is the second home position in original data, the second home position will be deleted after modifying stitching start position. Please reset the second home position.

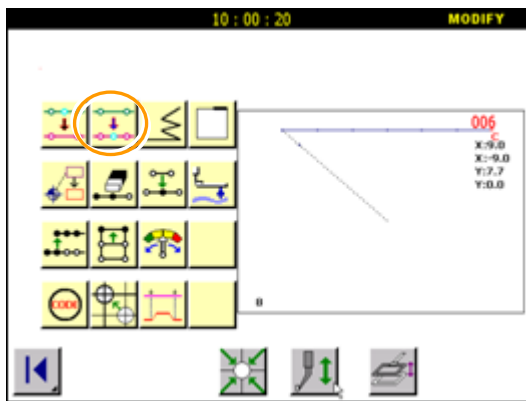
6.2 ADDING A STITCH




[Example] The required stitch length B' will be added to the B point of the following type of stitching data.



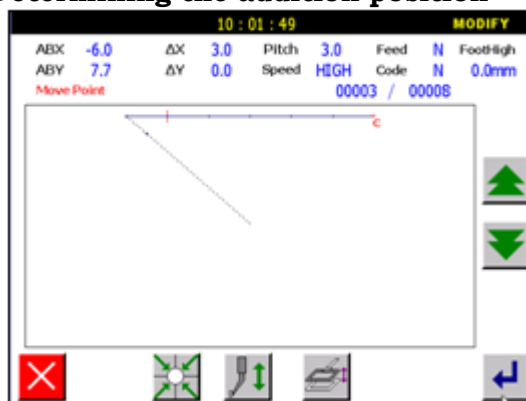
[Operation details]




① Selecting stitch addition



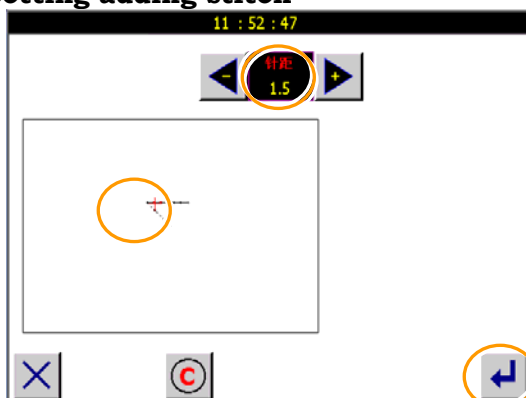
- Press  and  to enter the modification mode.
- Press stitch add key  to enter the stitch add setting screen.

② Determining the addition position

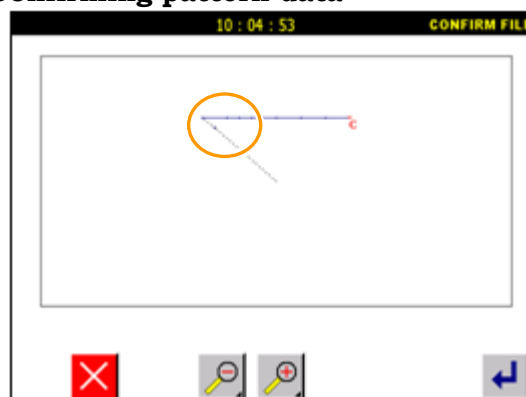






- Using Jog key  / , determine the position to be added. Move to the addition position (point B).
- Press .

③ Setting adding stitch



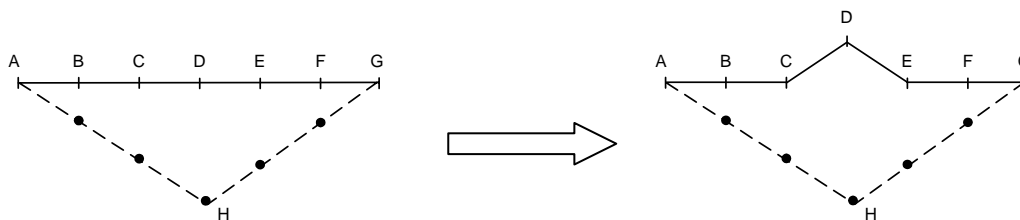
④ Confirming pattern data



- Press  to set. Return to pattern data drawing screen.
- Press  key or  key to reduce or amplify pattern. Then, confirm the pattern.
- Before setting, When  is pressed, the additions executed last will be undone. Return to the previous screen

6.3 MODIFYING THE STITCH POSITION (POSITION OF SUBSEQUENT DATA FIXED)

[Example] The D point in the following type of stitching data will be moved. (The E, F and G points will not be changed)



[Operation details]

① Selecting stitch position modification



- Press and on main menu screen to enter the modification mode.

- Press stitch position modification key .

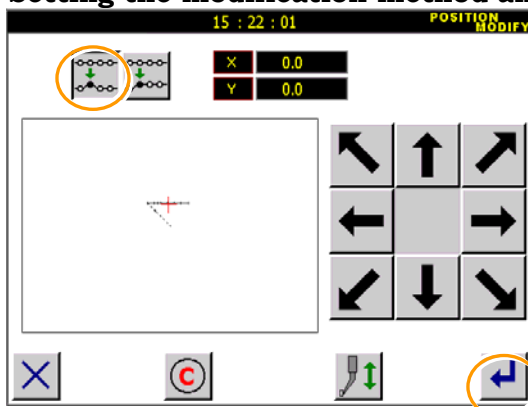
② Determining the modification position



- Using Jog / , determine the position to be added. Move to the modification position (point D).

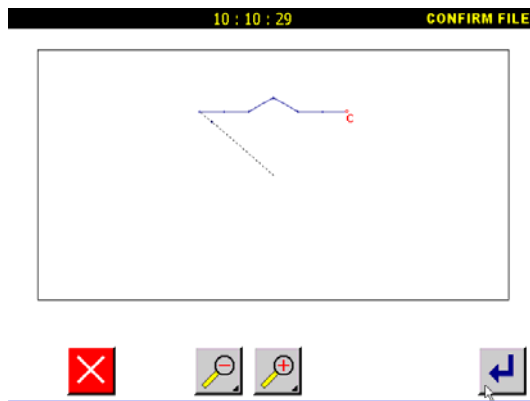
- Press to confirm.

③ Setting the modification method and modification amount



- To set the method, press (pattern data after modification stitch fixed), and move to the modification position (point D) using the direction key s. As shown on the above screen, move up 3.1 from the previous Point D.

- Press to set. (The stitch position will be modified.)

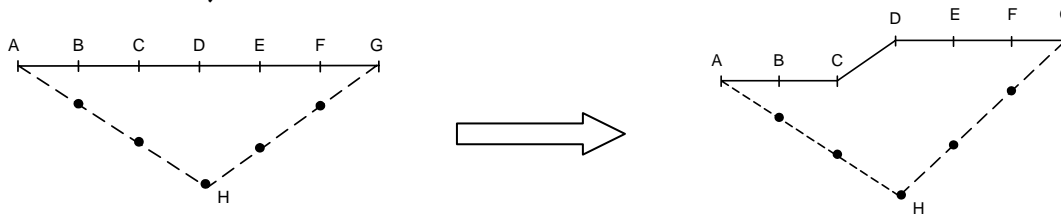


- Press to set. Return to pattern data drawing screen.
- Press key or key to reduce or amplify pattern. Then, confirm the pattern.
- Before setting, when is pressed, the modifications executed last will be undone. Return to the previous screen.

④ Confirming the pattern data after modifying the stitch position

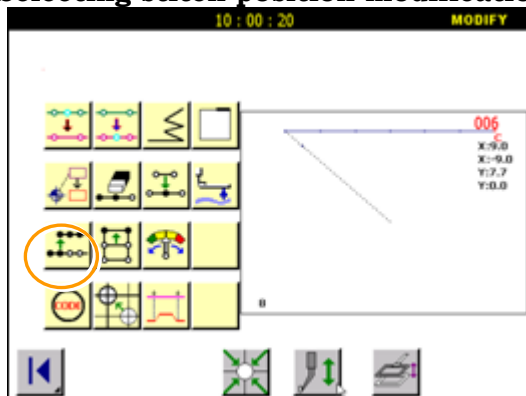
6.4 MODIFYING THE STITCH POSITION (SUBSEQUENT DATA POSITION MOVED)

[Example] The Point D in the following type of stitching data will be moved.(The E, F and G points will move)



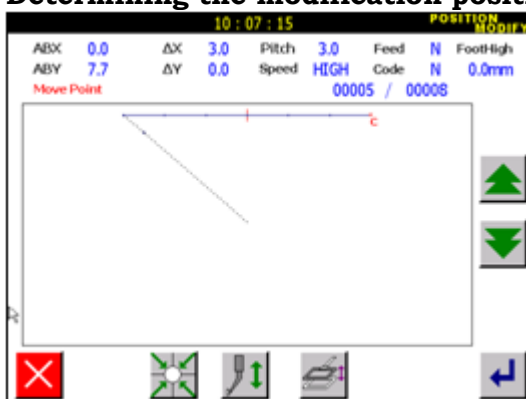
[Operation details]

① Selecting stitch position modification



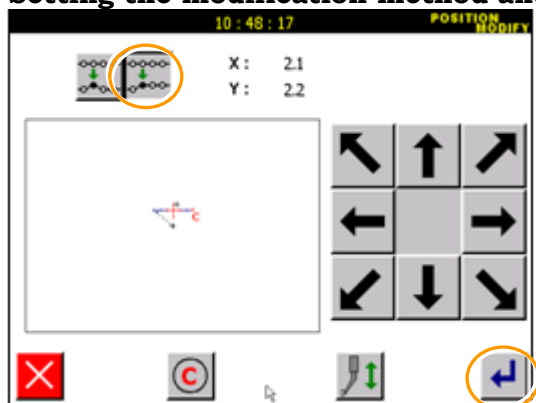
- Press and on main menu screen to enter the modification mode.
- Press stitch position modification key .



② Determining the modification position







- Using jog / , determine the position to be added. Move to the modification position (point D). Press key to confirm the modification position (point D), as the screen shown below.
- Press .

③ Setting the modification method and modification amount



- To set the method, press  (pattern data after modification stitch fixed), and move to the modification position (Point D') by using the arrow mark keys.
- Press  to set. (The stitch position will be modified.)

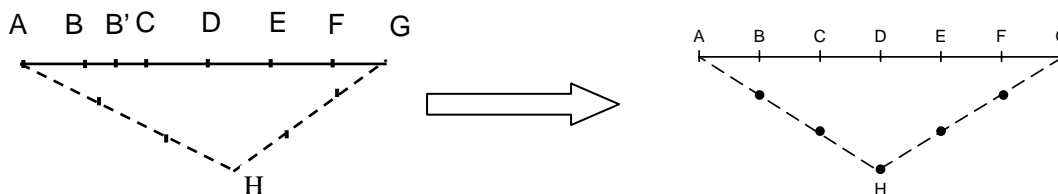


- Press  to set. Return to pattern data drawing screen.
- Press  key or  key to reduce or amplify pattern. Then, confirm the pattern.
- Before setting, when  is pressed, the modifications executed last will be undone. Return to the previous screen.

④ Confirming the pattern data after modifying the stitch position

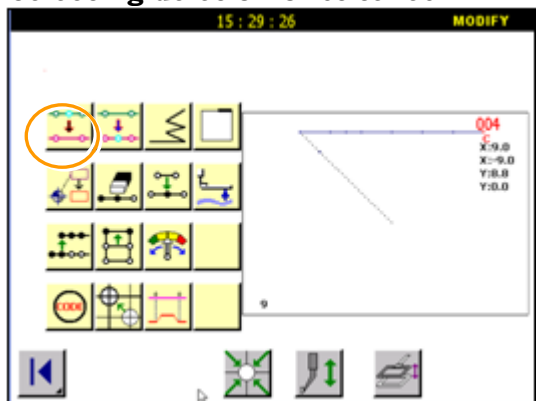
6.5 DELETING A STITCH (DELETING THE DESIGNATED No. OF STITCHES)




[Example] The Point E between the Point D and Point F in the following type of stitching data will be deleted.



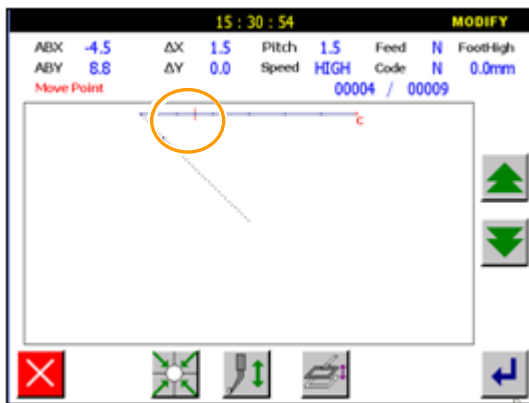
[Operation details]

① Selecting deletion of stitches

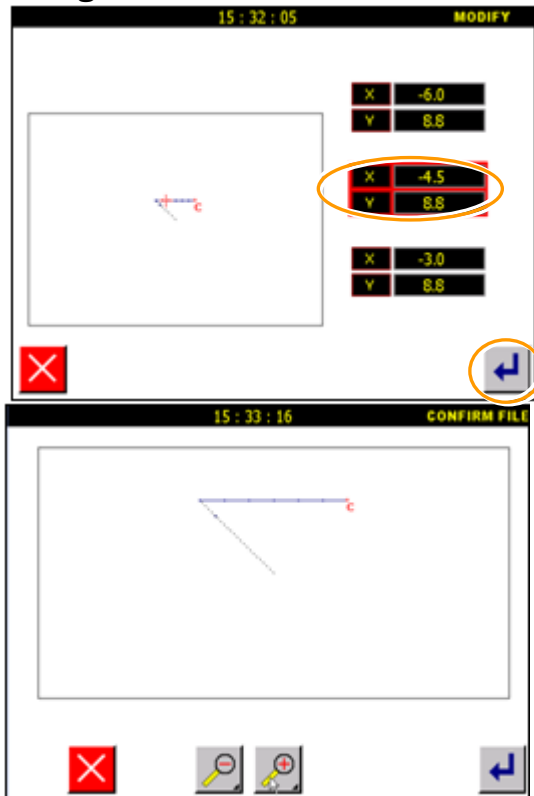






- Press  and  on main menu screen to enter the modification mode.
- Press stitch deletion key .

② Determining the deletion position




③ Setting the deletion stitch





- Using jog  / , or  / , determine the position to be added. Move to the addition position (Point B').


- Press .

- The second point in this figure is the deletion stitch.

- Then press  to confirm. (1 stitch of data will be deleted.)

- Press  to set. Return to pattern data drawing screen.

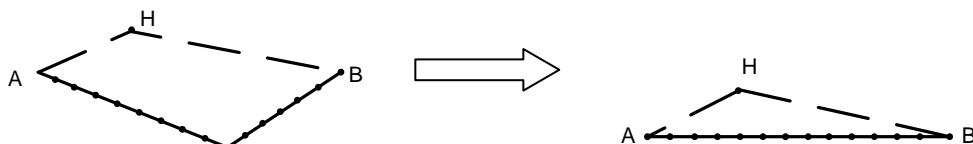
- Press  key or  key to reduce or amplify pattern. Then, confirm the pattern.

- Before setting, when  is pressed, the deletions executed last will be undone. Return to the previous screen.

④ Confirming the pattern data after deleting one stitch.

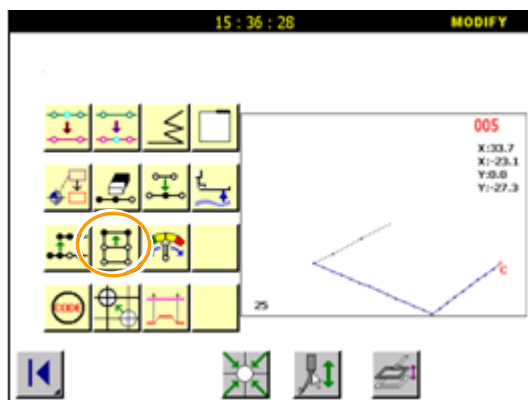
6.6 MODIFYING A BLOCK 1 (LINEAR INPUT)




[Example] The section between the point A and point B of the following type of stitching pattern will be modified to a linear line.



[Operation details]




① Selecting block modification



- Press  and  on main menu screen to enter the modification mode.
- Press block modification key .




② Determining the block modification range (start point)



- Press jog  / , and move needle to the Point A (start point).
- Press .

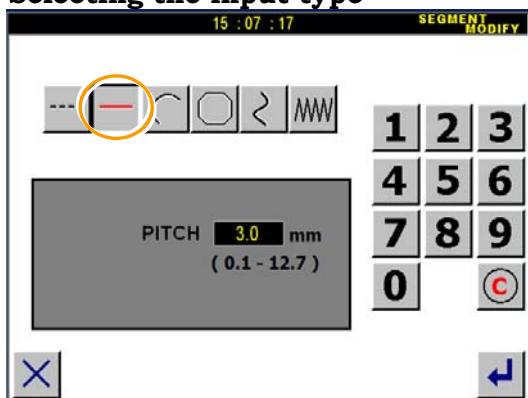
④ Determining the block modification range (end point)





- Press jog  / , and move needle to the Point B (end point).
- Press .

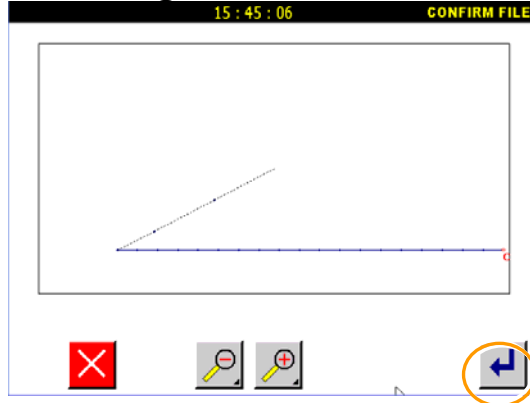
⚠ Caution: When the end point is determined, the work holder will automatically return to the start point. Take care when the needle is lowered, etc.

⑤ Selecting the input type



- Press linear .
- Use numeric key to input stitch length.
- Press  to set the data.

⑥ Confirming the data creation



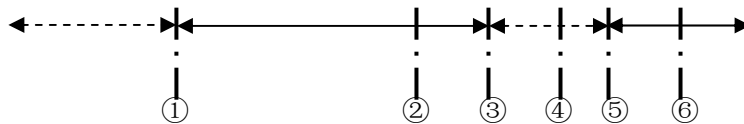
- Press  to set data

⑦ Confirming the modified data

Memo:

1. When arc modification is selected for block modification: Arc modification will be executed just by indicating one point in the designated range.
2. When linear modification is selected for block modification: The modification range will be connected with linear lines.
3. If the block to be modified contains code data, the code data will be deleted.
4. The block modification start point and end point are explained below.

- ✓ For modification other than feed data modification
The start point can be designated when the stitch is stitching data.
The end point can be designated when the section before the stitch is stitching data.
(The broken line denotes feed data, and the real line denotes stitching data.)



Start point

①
①
①

End poin

②
③
④

Designation validity

Valid (OK)

Valid (OK)

Invalid (NG)

.....Prior section is feed data

Invalid (NG)

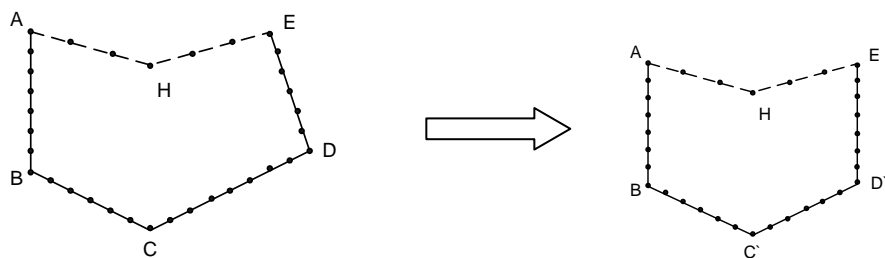
.....Prior section is feed data

Valid (OK)

- ✓ For feed data modification
The start point can be designated when the stitch is stitching data or feed data.
The end point can be designated when the section before the stitch is stitching data or feed data.
(The data between the start point and end point is irrelevant.)

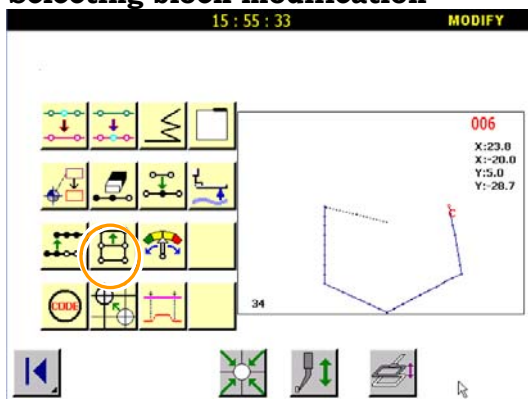
6.7 MODIFYING A BLOCK 2 (BROKEN LINE, ARC, CURVE LINE)




[Example] The Point C and Point D in the following type of data are each modified to the Point C' and Point D'.



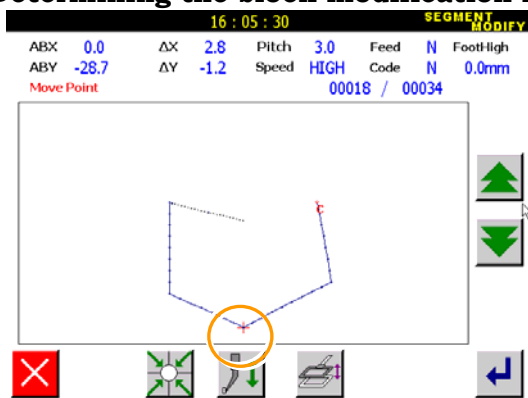
[Operation details]




① Selecting block modification



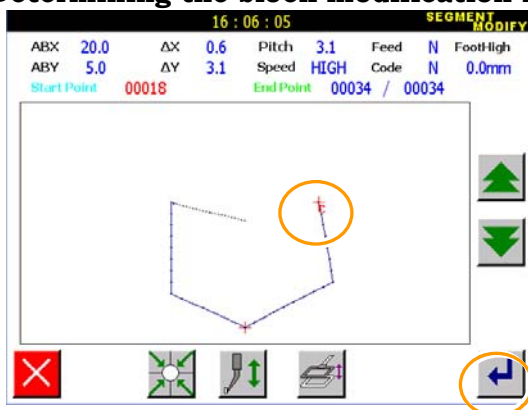
- Press  and  on main menu screen to enter the modification mode.
- Press block modification key .




② Determining the block modification range (start point)



- Press Jog  / , and move needle to the Point B (start point).
- Press .

③ Determining the block modification range (end point)

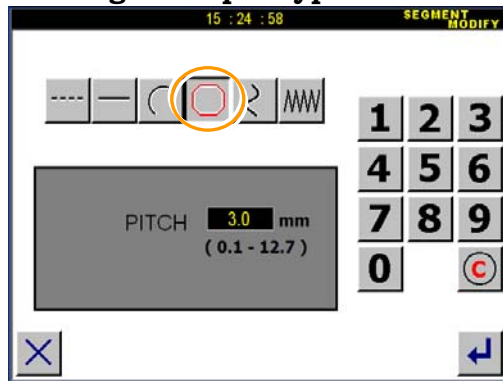




- Press jog  / , and move needle to the Point E (end point).
- Press .



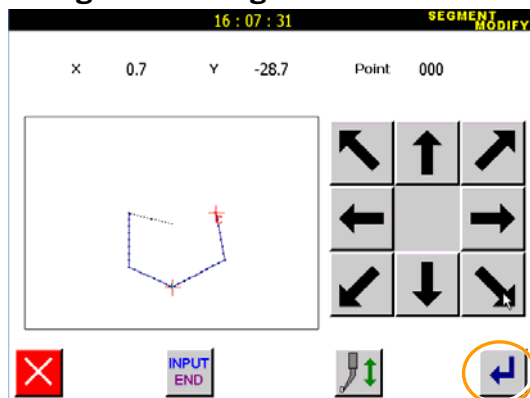
Caution: When the end point is determined, the work holder will automatically return to the start point. Take care when the needle is lowered, etc.



④ Selecting the input type



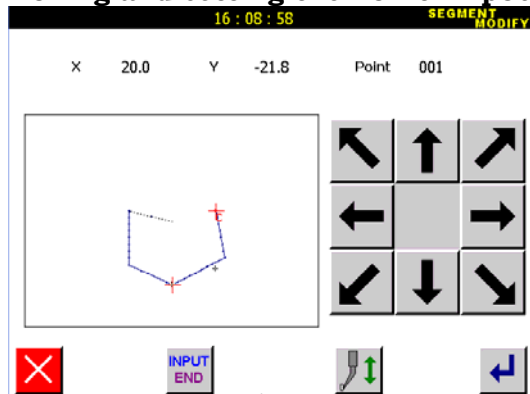
- Press broken line .
- Use numeric key to input stitch length.
- Press  to set the data.



⑤ Moving and setting the modification origin jog position



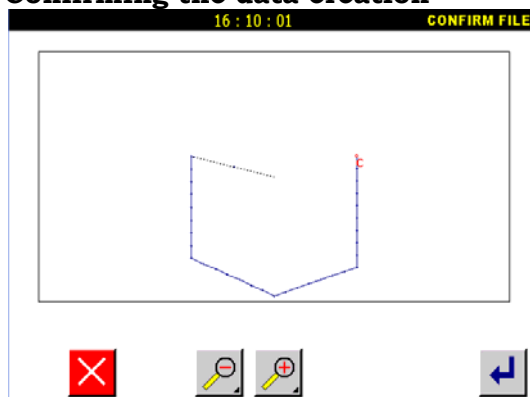
- Use direction key  and move needle to Point C` (the position to be modified)
- Press .


⑥ Moving and setting the Point D` position



- Use direction keys and move needle to Point D`. (the position to be modified)
- Press .
- If there are several positions to be modified, repeat steps ⑤. The number of input points will increase.
- After determining modified Point D positions, press . The system connects Point D' and Point E automatically.

⑦ Confirming the data creation



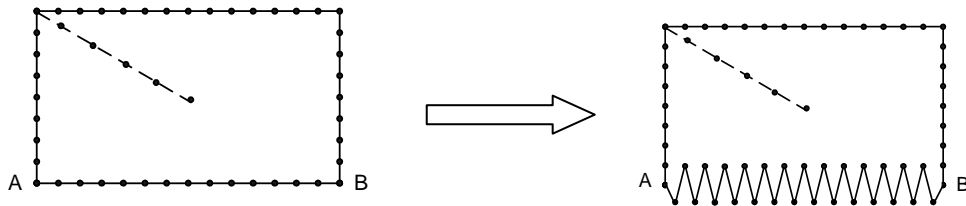
- Press  to set. (The block position will be modified.)

Caution: The work holder will automatically return to the start point. Take care when the needle is lowered, etc.

⑧ Confirming the modified data

6.8 MODIFYING A BLOCK 3 (ZIGZAG INPUT)

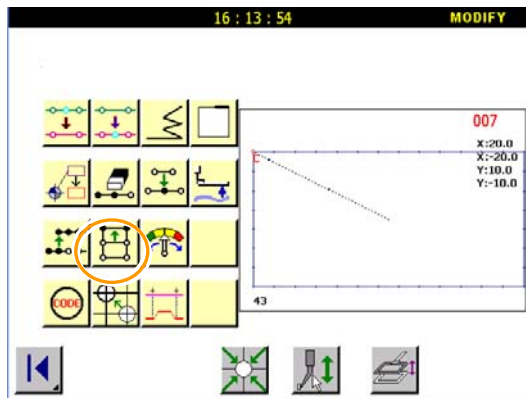
[Example] The section between the Point C and Point D in the following type of stitching data is modified to a zigzag pattern.



[Operation details]

① Selecting block modification

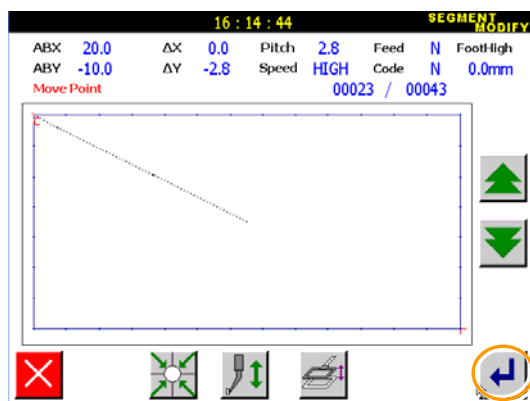
②



- Press and on main menu screen to enter the modification mode.

- Press block modification key .

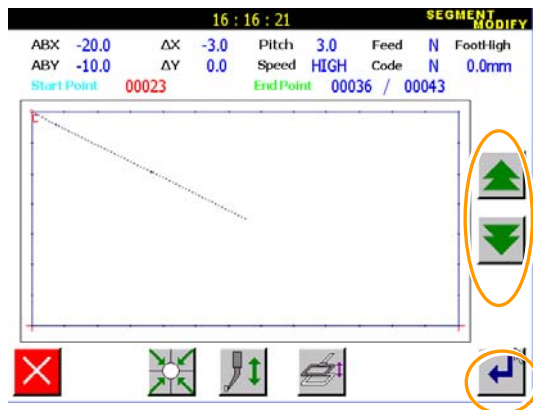
② Determining the block modification range (start point)






- Press jog / , and move needle to the Point A (start point).

- Press .

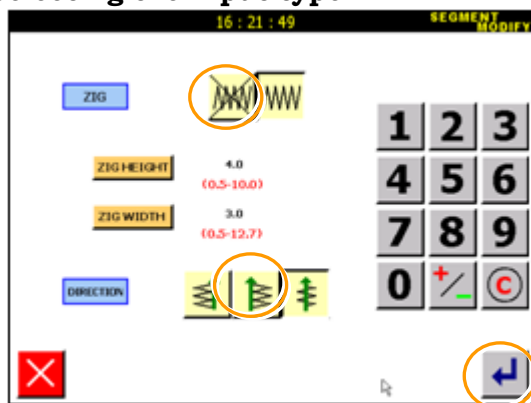
⑦ Determining the block modification range (end point)





- Press jog  / , and move needle to the Point B (end point).
- Press .

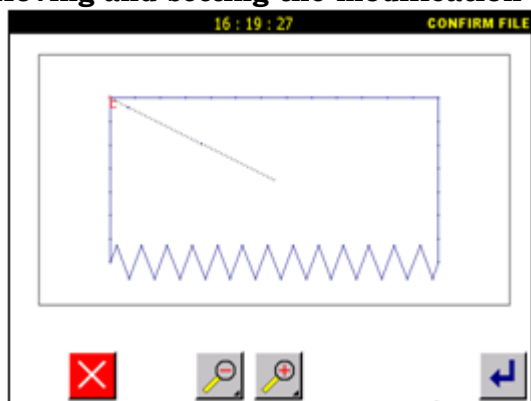
Caution: When the end point is determined, the work holder will automatically return to the start point. Take care when the needle is lowered, etc.

④ Selecting the input type



- Press zigzag .
- Use numeric key to input deflection width, feed amount and creation direction. (Refer to "5.2.5 zigzag stitching (with overlap back tacking)" for details on the deflection width, feed amount and creation direction.)
- Press  to set the data.

⑤ Moving and setting the modification origin jog position

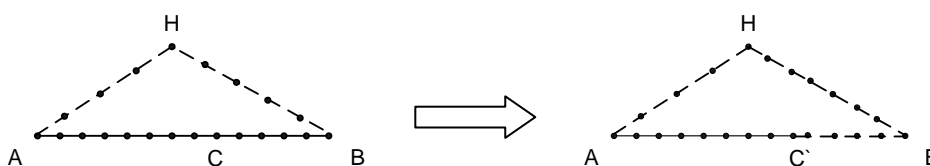


- Press .

⑧ Confirming the modified data

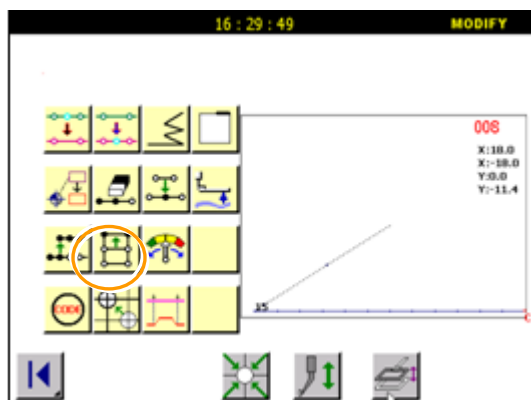
6.9 MODIFYING A BLOCK 4 (CHANGING THE FEED DATA)




[Example] The Point C and Point B in the following type of data are each modified to the Point C' and Point B'.



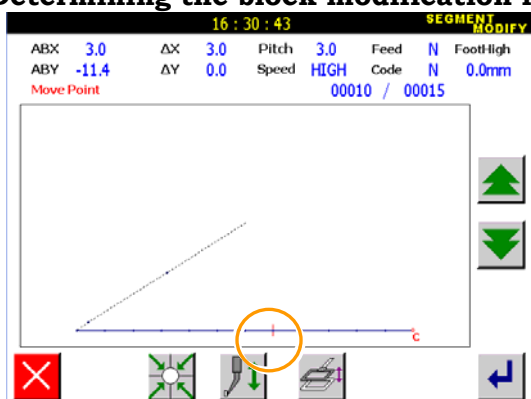
[Operation details]




① Selecting block modification



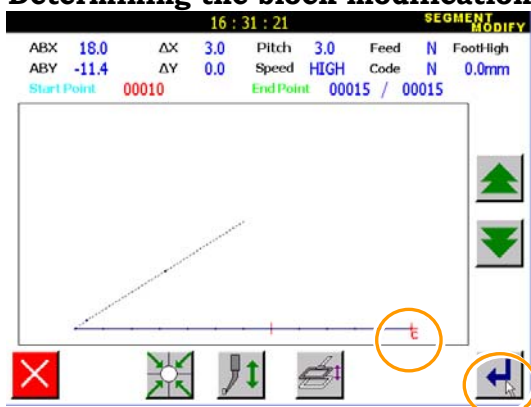
- Press  and  on main menu screen to enter the modification mode.
- Press block modification key .




② Determining the block modification range (start point)



- Press jog  / , and move needle to the Point C (start point).
- Press .

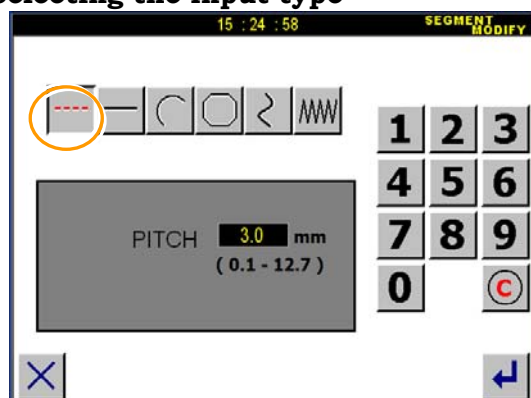
③ Determining the block modification range (end point)



- Press jog  / , and move needle to the Point B (end point).
- Press .

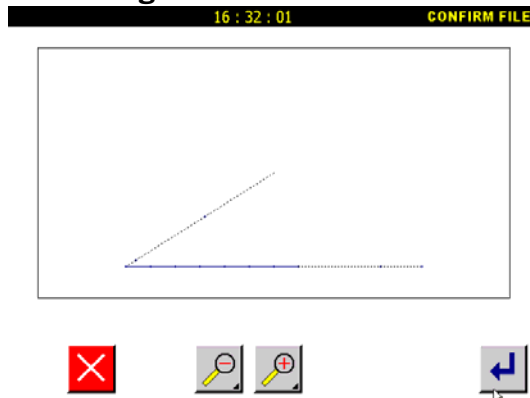
Caution: When the end point is determined, the work holder will automatically return to the start point. Take care when the needle is lowered, etc.


④ Selecting the input type



- Press  and .

⑤ Confirming the data creation

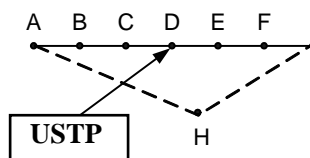


- Press  to set. (The block position will be modified.)

Caution: The work holder will automatically return to the start point. Take care when the needle is lowered, etc.

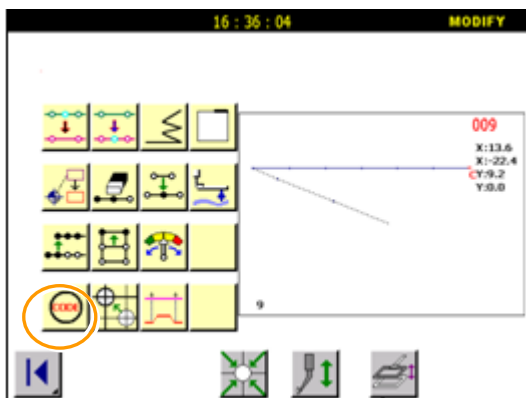
6.10 MODIFYING CODE DATA (ADDING CODE DATA)




[Example] The needle UP halt code (USTP) will be added to the Point D of the following type of stitching data.



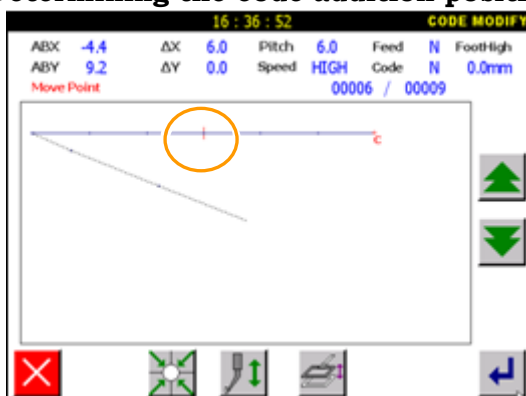
[Operation details]



① Selecting code data addition



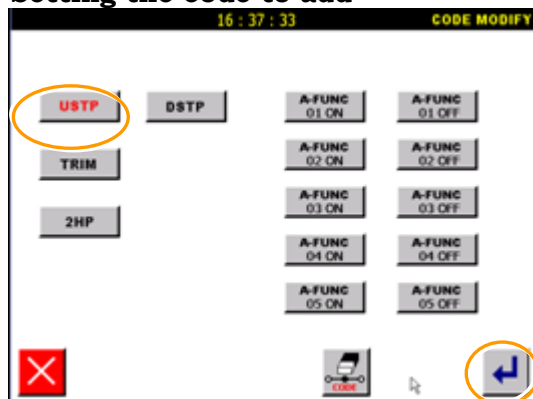
- Press  and  on main menu screen to enter the modification mode.
- Press code data change key  and enter the next setting screen

② Determining the code addition position



- Press jog  / , and move needle to the Point D (code addition position).

② Setting the code to add

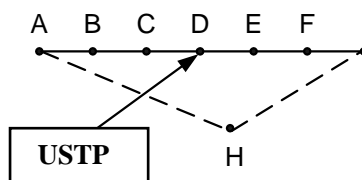


- Press **USTP** (USTP).
- Press

④ Confirming the modifications and return

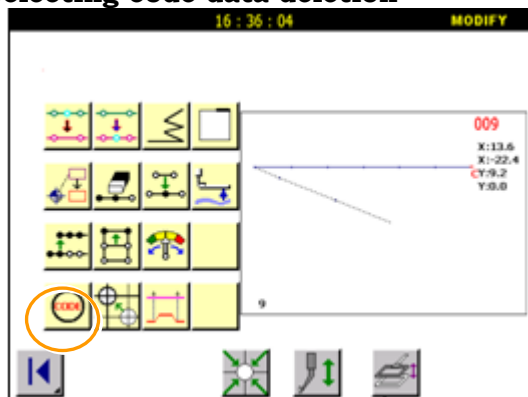
6.11 MODIFYING CODE DATA (DELETING CODE DATA)

[Example] The needle UP halt code (USTP) will be deleted from the Point D of the following type of stitching data.



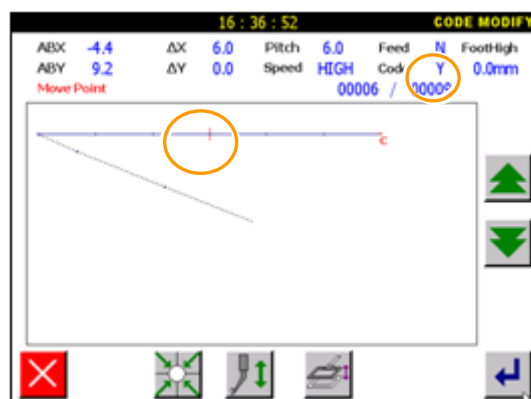
[Operation details]

① Selecting code data deletion



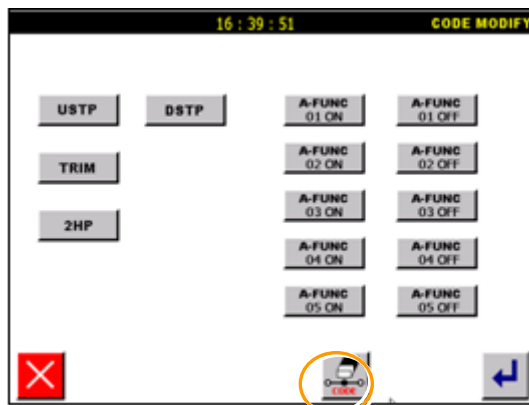
- Press and on main menu screen to enter the modification mode.
- Press code data change key and enter the next setting screen.

② Determining the code deletion position



- Press jog / , and move needle to the Point D (code deletion position).
- Confirm the code is Y.
- Press key to confirm the position.

③ Setting the code data deletion



- Press code data deletion key .

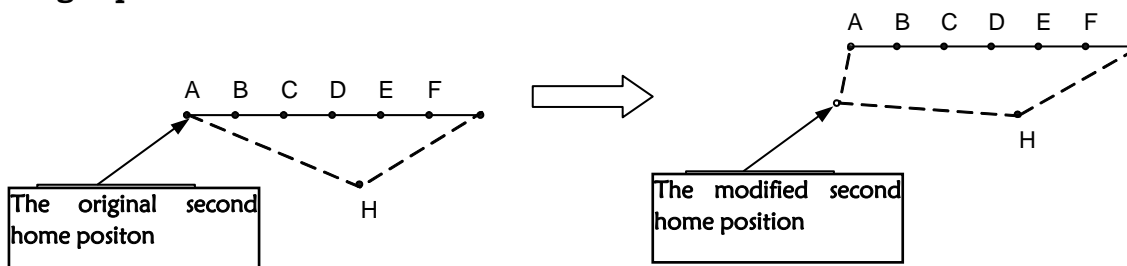
Then, <USTP> on right side of screen disappeared

- Press  to confirm.

④ Returning to the standard screen and end the modification

6.12 MODIFYING THE SECOND HOME POSITION

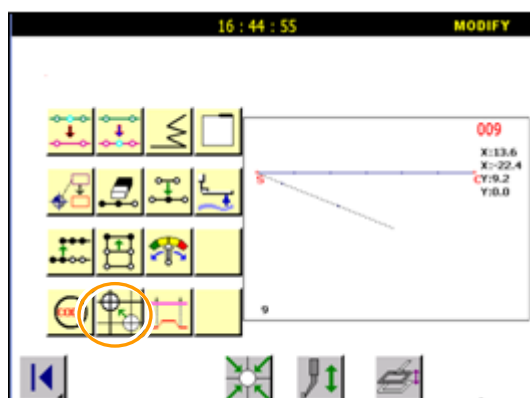
[Example]: The second home position in left pattern will be modified to the position in the right pattern as shown below.






Caution: The second home position modification only modifies the position of the second home position, and never modify the position of stitching start position. The way between the second home position and the stitching start position is filled with moving.

[Operation details]

① Selecting the code data modification



- Press  and  on main menu screen to enter the modification mode.

- Press the second home position modification key  and enter the setting screen.



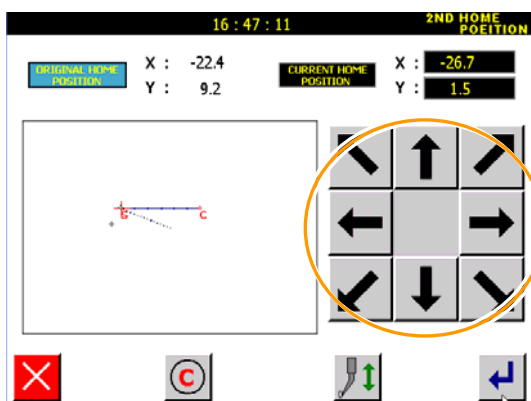
- If there is no second home position in pattern, the system will display the left screen. Then, return to the main menu screen to select again.
- Otherwise, enter the next setting screen.


② Selecting the second home position modification



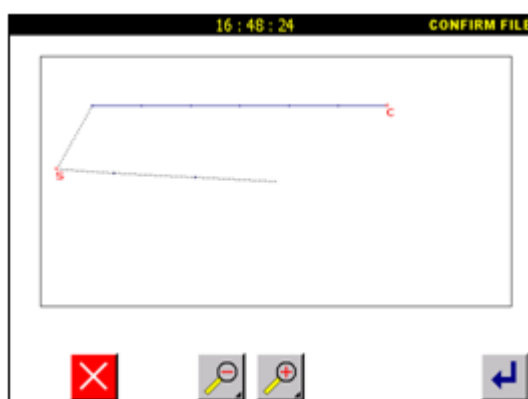
- Press **MODIFY SECOND HOME POSITION** to enter the second home position modification mode.



③ Modifying the second home position



- Use the direction keys to move the second home position to the new position.
- Press .
- Enter the pattern creation screen.

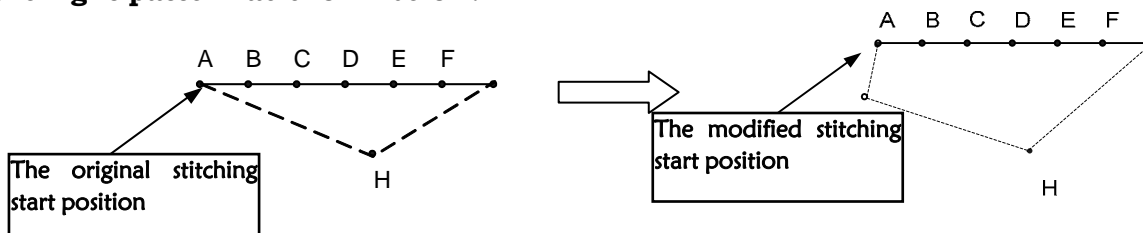
④ Confirming modification and storing



- Press  to set the modification.
- Press  to cancel modification.

6.13 MODIFYING THE STITCHING START POSITION

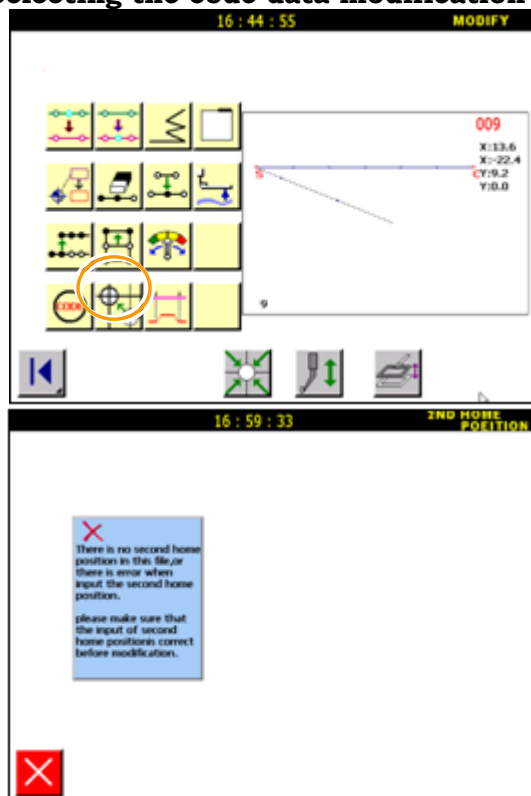
[Example]: The stitching start position in left pattern will be modified to the position in the right pattern as shown below.






Caution: The stitching start position modifications only modify the stitching start position, and never modify the second home position. The way between the second home position and the stitching start position is filled with moving.

[Operation details]

① Selecting the code data modification



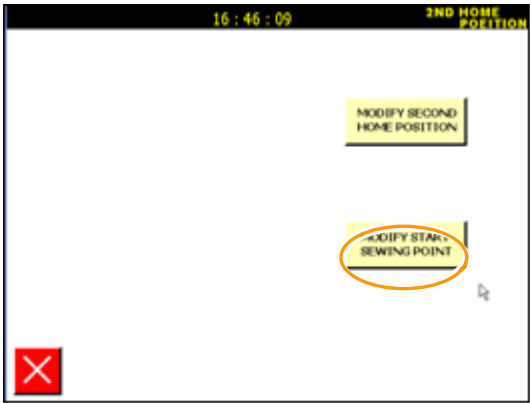
- Press  and  on main menu screen to enter the modification mode.

- Press the second home position modification key  and enter the setting screen.

- If there is no second home position in pattern, the system will display the left screen. Then, return to the main menu screen to select again.

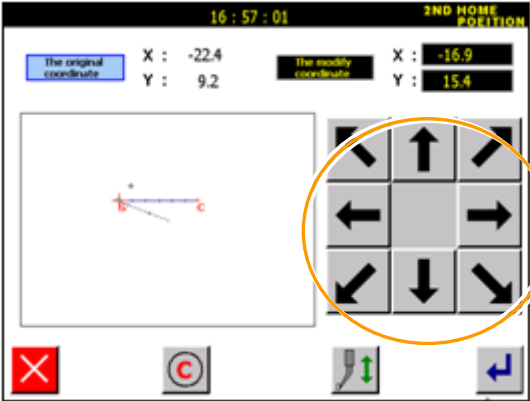
- Otherwise, enter the next setting screen.


② Selecting the stitching start position modification



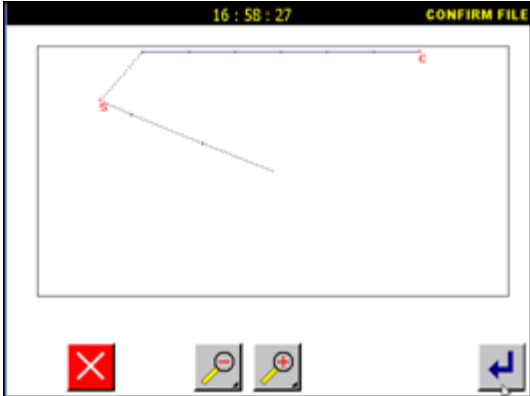
- Press **MODIFY START SEWING POINT** to enter the stitching start position modification.

③ Modifying the stitching start position



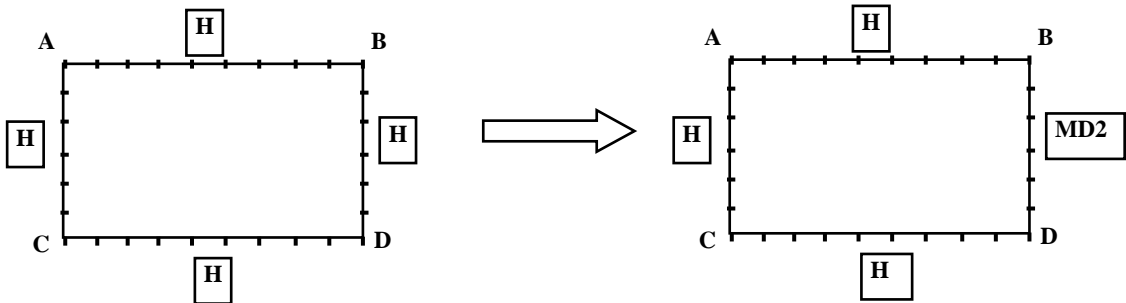
- Use the direction keys to move the stitch start position to the new position.
- Press .
- Enter the pattern creation screen.

④ Confirming modification and storing



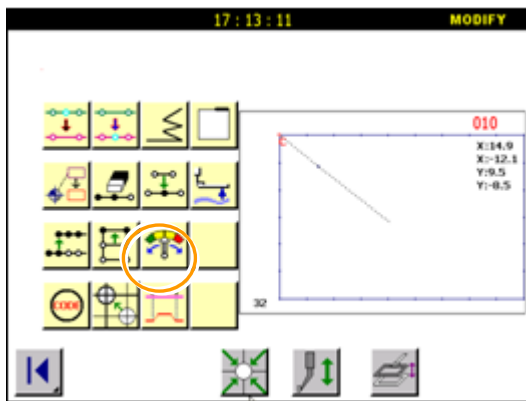
6.14 MODIFYING THE SPEED




[Example]: Select different speed to realize pattern stitching.



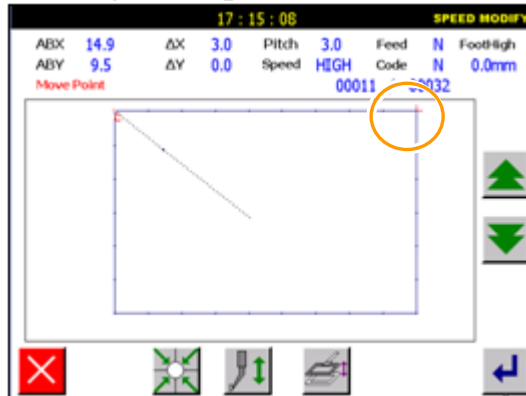
[Operation details]




① Selecting speed modification



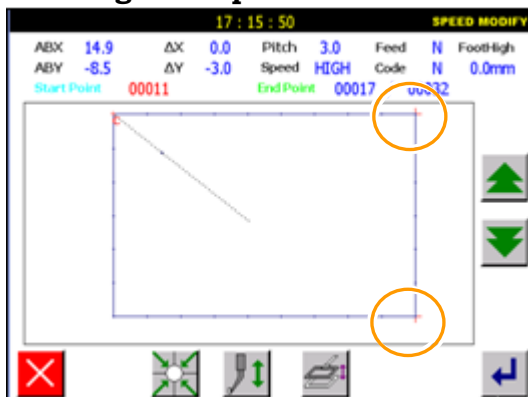
- Press  and  on main menu screen to enter the modification mode.
- Press  to enter setting screen.




② Selecting MD2 speed modification start position



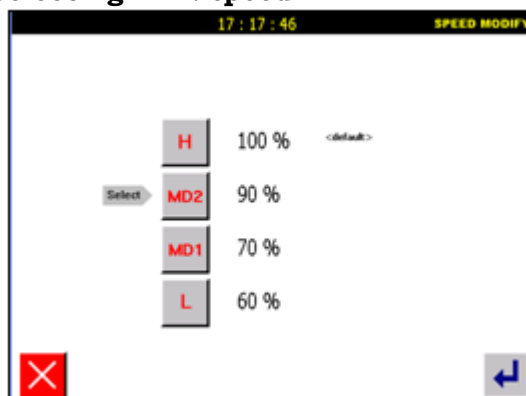
- Press jog  / , and move needle to the Point D (modification start position).
- Press  to confirm.



③ Selecting MD2 speed modification start position



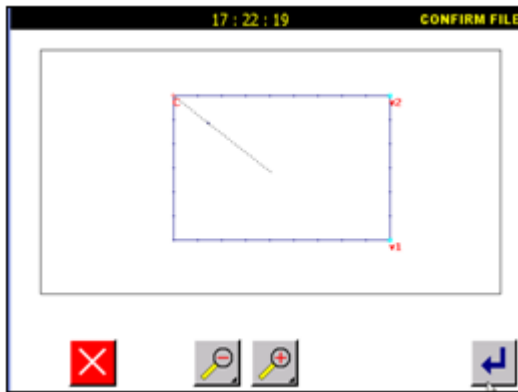
- Press jog  / , and move needle to the Point C (modification start position).
- Press  to confirm.

④ Selecting MD2 speed



- Select speed.
-  Code MD2 means middle-high speed.
-  Code H is the default speed.

⑤ Checking and confirming

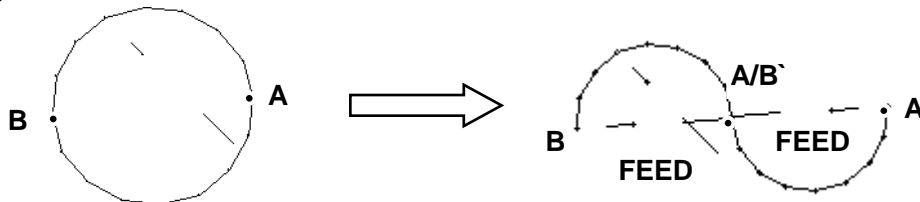


- Press  to conform speed setting.

- ⑥ MD1 speed setting repeats the ②~⑤ steps.
- ⑦ L speed setting repeats the ②~⑤ steps.
- ⑧

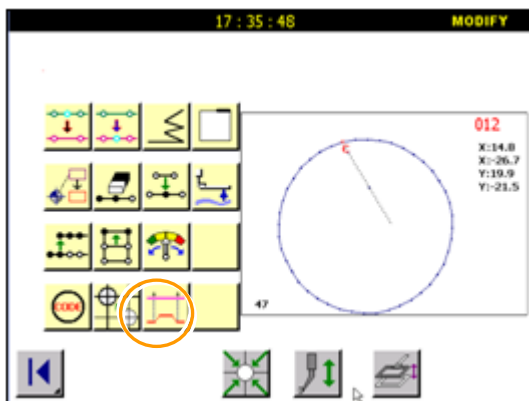
6.15 BLOCK MOVEMENT(FEEDING)




[Example] The block from Point A to Point B in the following will be moved by feeding and created A'B'.



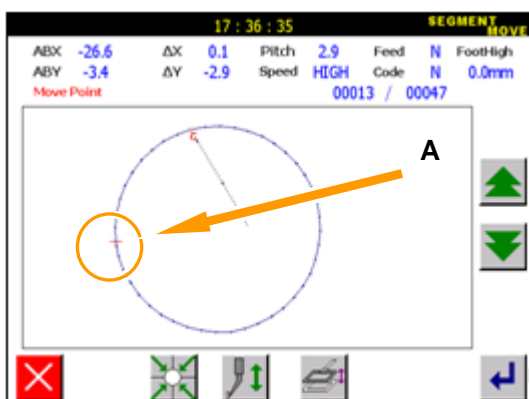
[Operation details]




- ① Selecting block movement



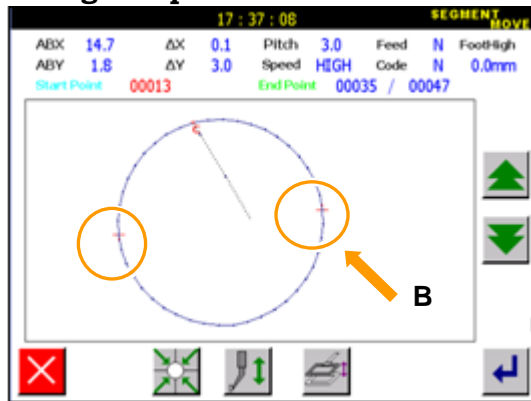
- Press  and  on the main menu screen to enter the modification mode. Then, press . To enter setting screen.

- ② Setting start point A



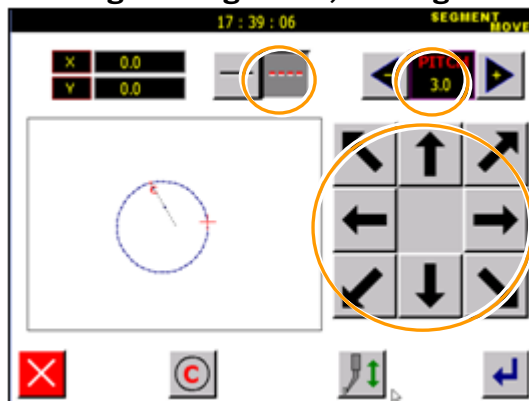
- Press jog  / , and move needle to the Point A (start point of moving block).
- Press  to confirm.

③ Setting end point B



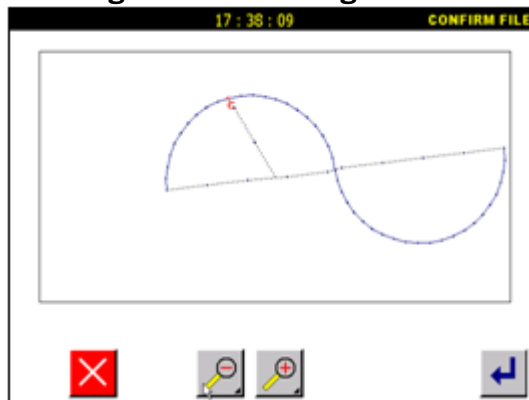
- Press jog / , and move needle to the Point B (end point of moving block).
- Press to confirm.

④ Selecting feeding mode, setting stitch length and moving position.



- Select feeding mode.
- Use and to set stitch length is 3.0mm.
- Use direction key to set moving position.

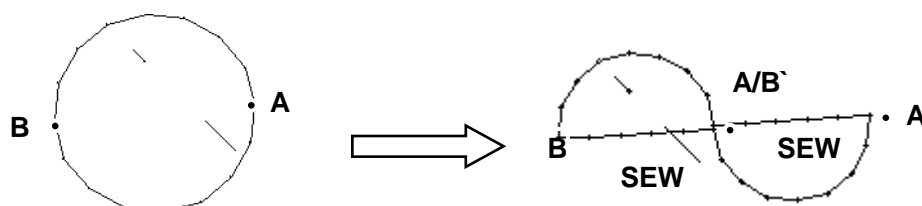
⑤ Checking and confirming



- Press to confirm block movement.

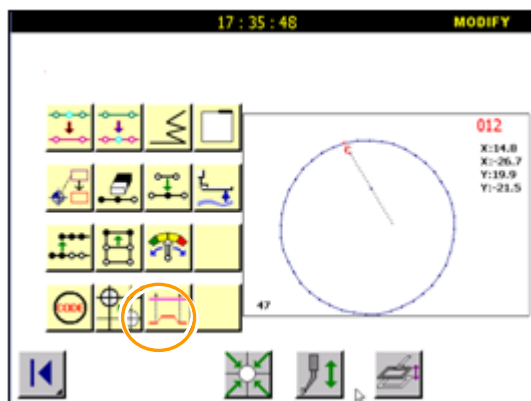
6.16 BLOCK MOVEMENT(LINEAR)

[Example] The block from Point A to Point B in the following will be moved by linear mode and created A'B'.



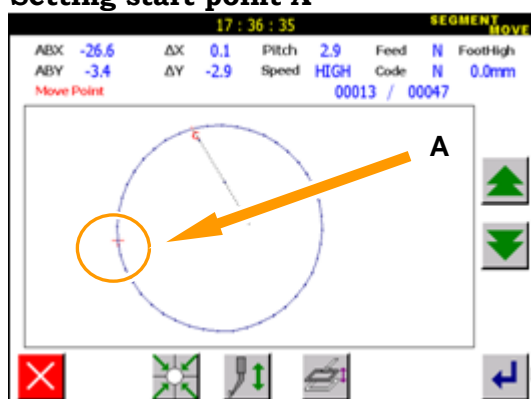
[Operation details]

① Selecting block movement



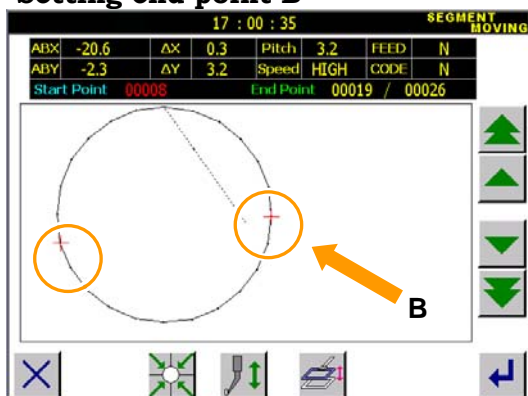
- Press and on the main menu screen to enter the modification mode. Then, press to enter setting screen.

② Setting start point A



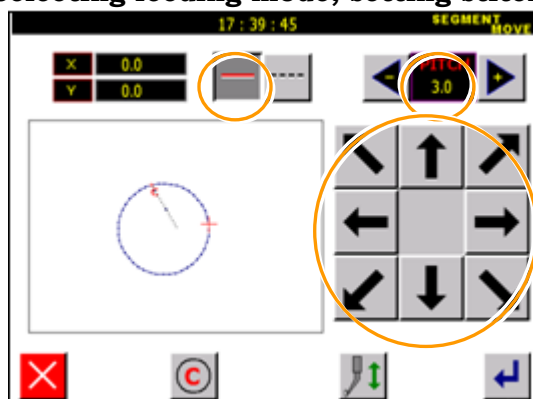
- Press jog / , and move needle to the Point A (start point of moving block).
- Press to confirm.

③ Setting end point B



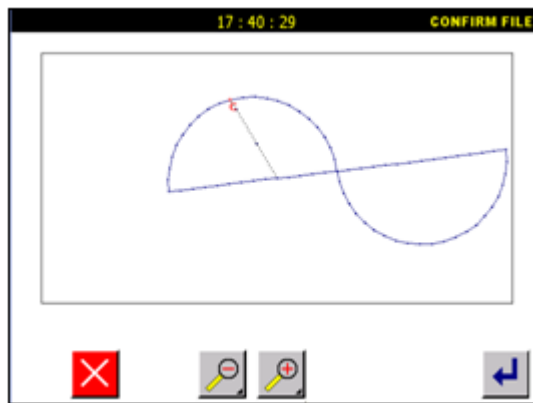
- Press jog / , and move needle to the Point B (end point of moving block).
- Press to confirm.

④ Selecting feeding mode, setting stitch length and moving position.



- Select feeding mode.
- Use and to set stitch length is 3.0mm.
- Use direction key to set moving position.






⑤ Checking and confirming



- Press  to confirm block movement



7 PATTERN DATA CONVERSION

Main data conversion mode functions

Function	Key	Details	Details setting
Back tacking		Existing back tacking can be modified, and new back tacking can be created.	 Start/end back tacking
Fixing		Existing fixing can be modified, and new fixing can be created.	
Zigzag stitching		Existing zigzag stitching can be modified, and new zigzag stitching can be created.	
Multiple		The multiple distance, multiple direction and number of multiple stitching times for multiple stitching data can be changed.	

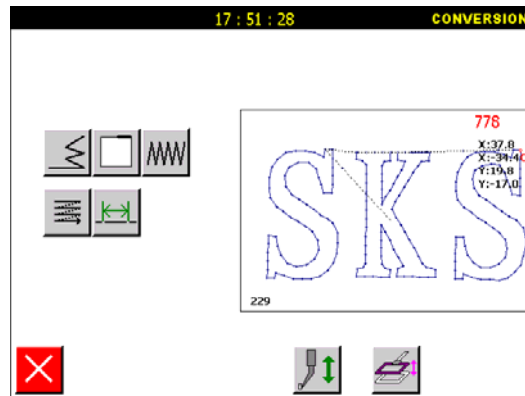
Entering the conversion mode



- Press  and  on the main menu screen to enter the conversion mode. Then, the conversion is carried out for the current pattern data.

Caution: According to the pattern data complexity, the data conversion function enters two different screens as below:

(1) If the pattern data is complete, enter the conversion screen as below: (The pattern data based on Wince is complete.)

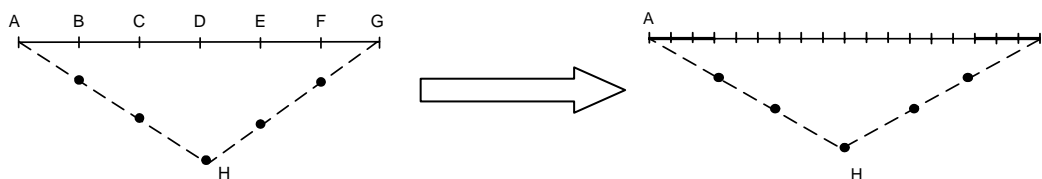


(2) Combined pattern data or non-complete data: Non-complete pattern data includes the assistant data losing of pattern data and the pattern data which compiled below Win 98 V3.0. The non-complete pattern data can be solved by recreating.



7.1 BACK TACKING CONVERSION

[Example]: Convert the left pattern data into the right pattern data. Add 3 N back tackings before and after linear stitching. (The bold section is back tacking.)



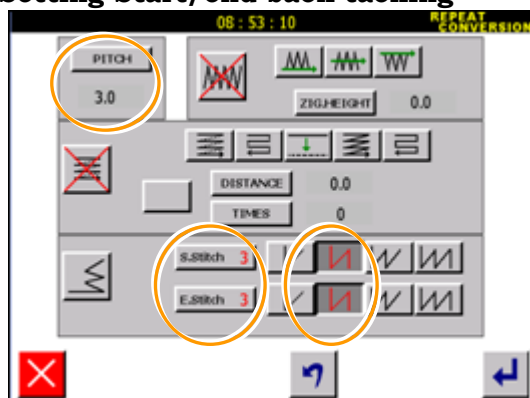
[Operation details]

① Selecting Start/end back tacking








- Press  to set back tacking.

② Setting Start/end back tacking





- The details are set on this screen.

The details set  here are (start/end back tacking), start  key (N mode). Press  key to set start stitch, and use numeric key to set three start stitches.

Start  key (N mode), press  key and use numeric key to set three end stitches.

- Press  to confirm.

• Press  key or  key to reduce or amplify pattern.

- Press  to return.

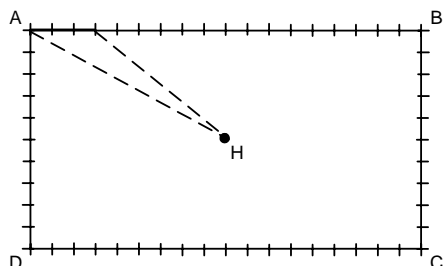
Press  to set the conversion.

③ Checking pattern data



7.2 OVERLAP BACK TACKING CONVERSION

[Example] The following type of pattern data will be created.

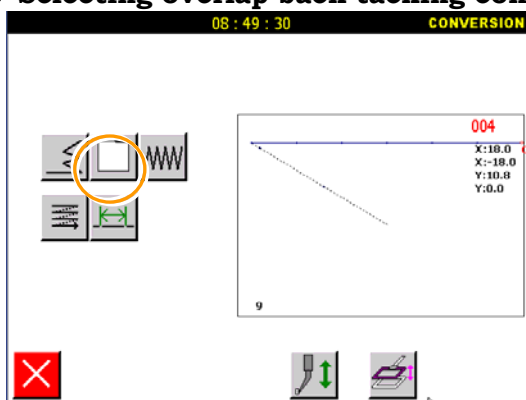


Input a rectangle as a broken line, and then insert overlap back tacking at the end. (The overlap mode is entered once; three overlap stitches are made.)

Caution: It is a shutting figure in the figure made in [Broken line], [Circle], [Arc], [Curve] to be able to do multiple back tacking.

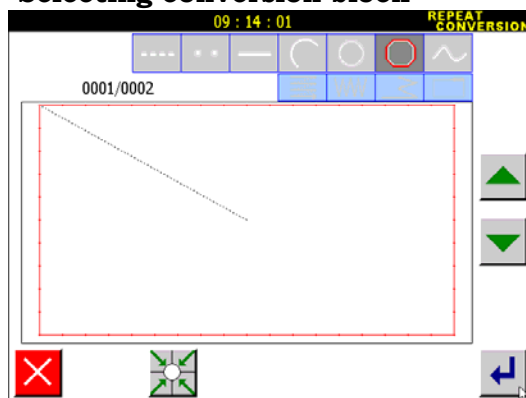
[Operation details]




① Selecting overlap back tacking conversion



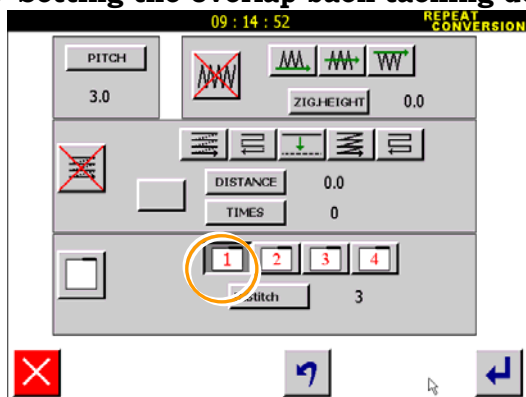
- Press  to set overlap back tacking.




② Selecting conversion block



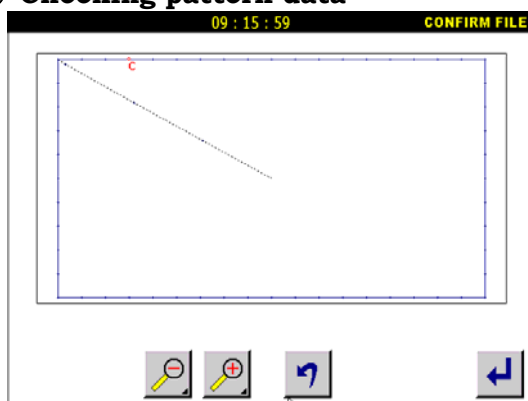
- Use  /  to select block, the overlap back tacking is unavailable for feed and liner pattern.
- Press  to set the multiple back tacking details.





③ Setting the overlap back tacking details



- The details are set on this screen. The details set here are,  (overlap back tacking), overlap mode , three overlap stitches.
- Press , the system will return to the input method setting screen.

④ Checking pattern data

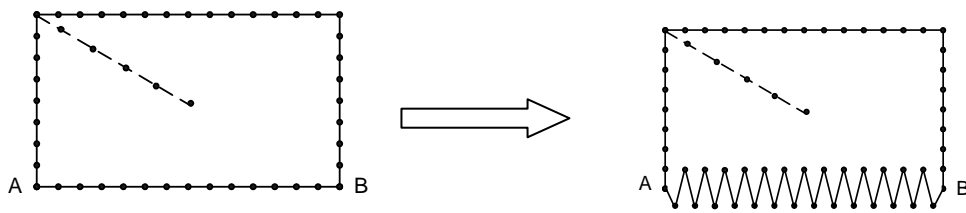


- Press  key or  key to reduce or amplify pattern.
- Press  to return.
Press  to set the conversion.

Caution: Check conversion results on main menu screen. For example, one conversion will add 3 overlap back tacking stitches.

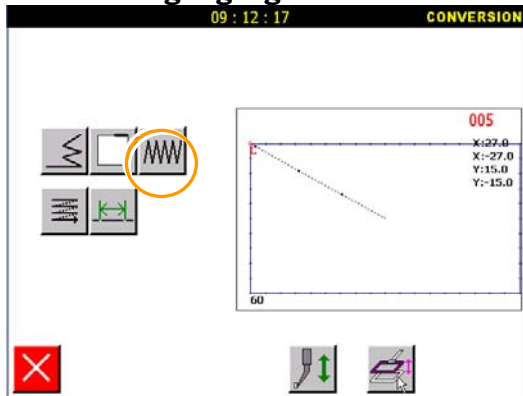
7.3 ZIGZAG STITCHING CONVERSION


[Example] Add zigzag stitching between Point A and Point B as shown below.



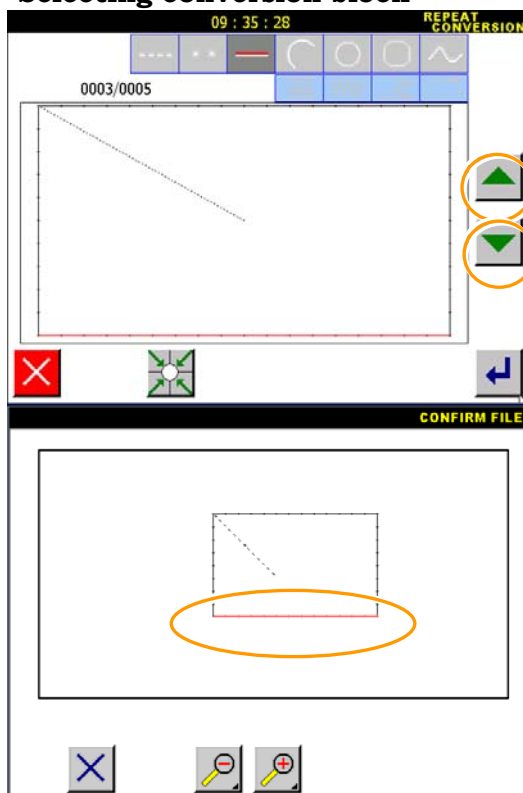
[Operation details]





① Selecting zigzag conversion



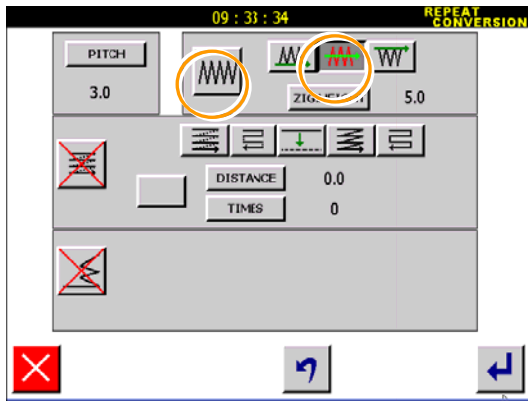
- Press  to set zigzag stitching.

② Selecting conversion block





- Use  /  to select block, the zigzag is unavailable for feed and liner pattern.
- Press  to set the multiple back tacking details.
- Press  to check selected red block.

③ Setting the zigzag details

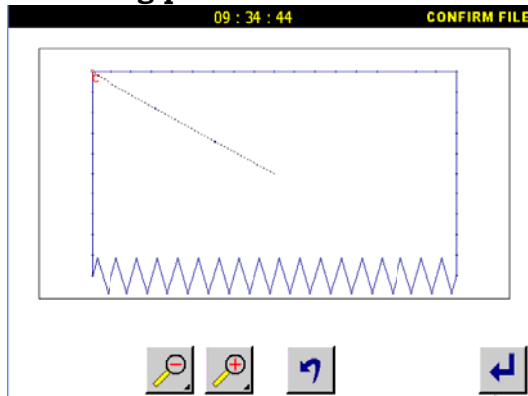




- Use numeric key to set the deflection width to 3.0

Press  key to set deflection direction (left side).

- After inputting the details, press  to set the data.

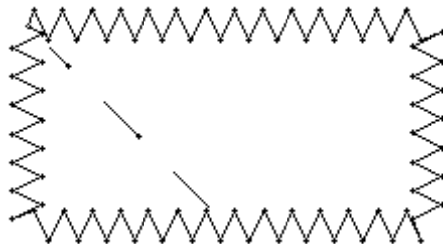
④ Checking pattern data



- Press  to return.
- Press  to set the conversion.

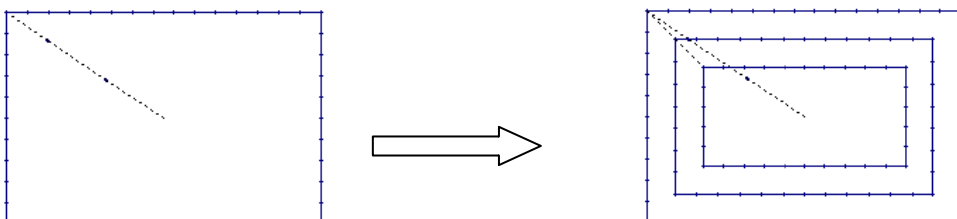
注 Caution: The 5 straight lines compose the rectangle. The user can select 5 sections, one is feeding, the other is linear line. Select 4th section to convert and create the example.

If the polygon compose the rectangle, the user only selects 2 sections, one is feeding and the other is polygon. If select 2nd section, the converted pattern is shown as below.



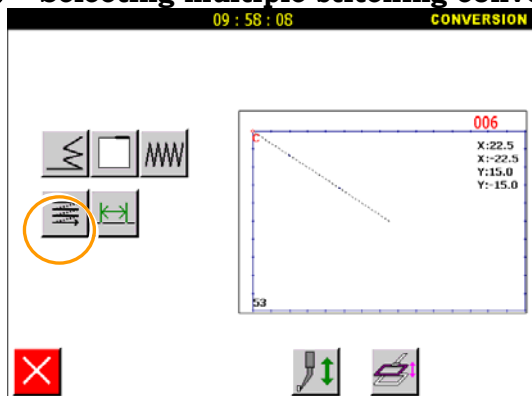
7.4 MULTIPLE STITCHING CONVERSION


[Example] The following type of pattern data will be created. Create the multiple stitching specification data. (The multiple distance is 4mm, the number of times is three.)



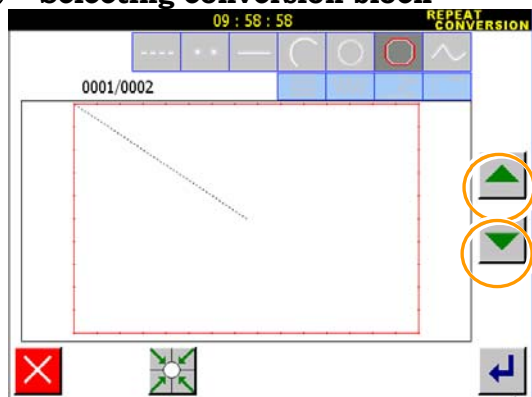
[Operation details]




① Selecting multiple stitching conversion



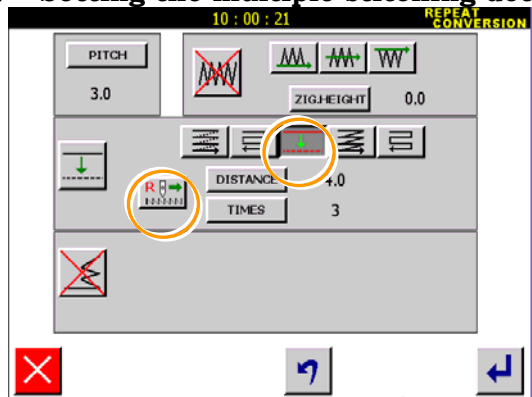
- Press  to set multiple stitching.







② Selecting conversion block



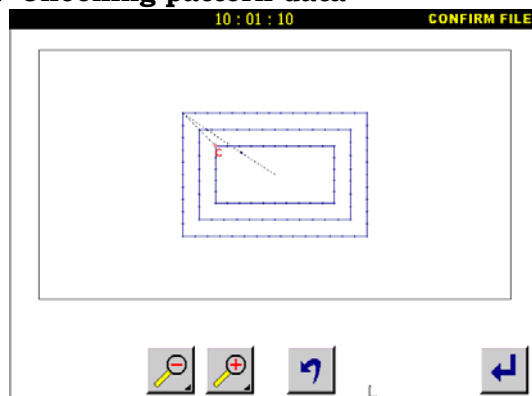
- Use  /  to select block, the zigzag is unavailable for feed and liner pattern.
- Press  to set the multiple back tacking details.



③ Setting the multiple stitching details



- Press  to set multiple stitching.
- Select the multiple directions, and press  key (left).
- Press  key, set the distance to 4.0.
- Press  to confirm.
- Press  key, set the number of times to 3.
- Press  to set the data.

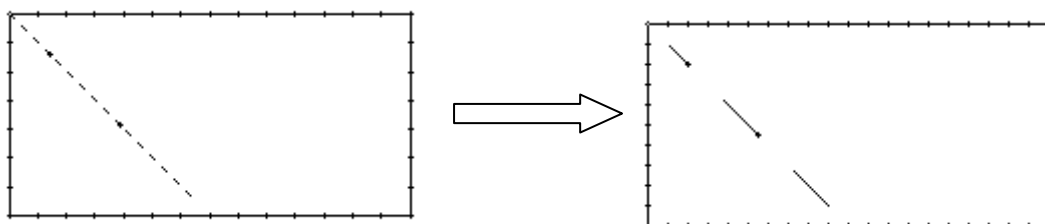
④ Checking pattern data



- Press  to set the conversion.
- Press  to return.

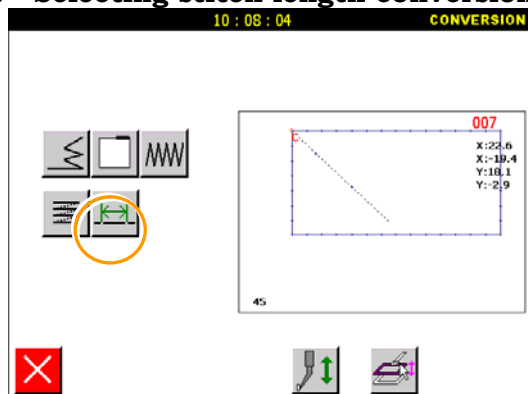
7.5 STITCH LENGTH CONVERSION

[Example]: Convert left pattern into right pattern. The stitch length of left is 3.0mm, the right is 2.0.



[Operation details]

① Selecting stitch length conversion



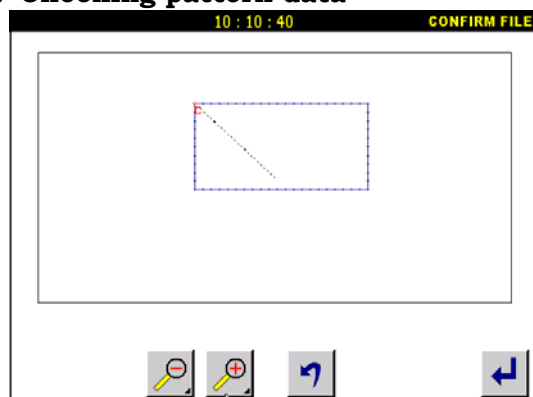
- Press  to set stitch length.



② Setting the stitch length details



- Use numeric key to set new stitch length.

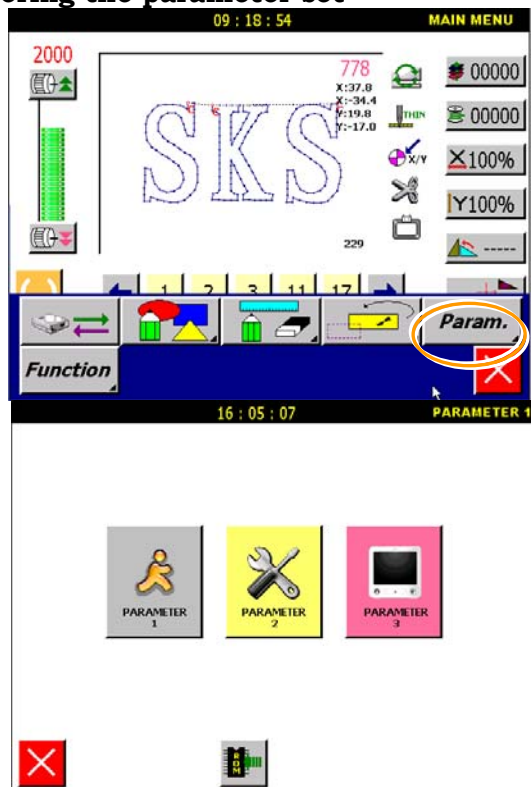
③ Checking pattern data







- Press  to set the conversion.
- Press  to return.

8 PARAMETER SET (USER PARAMETER)

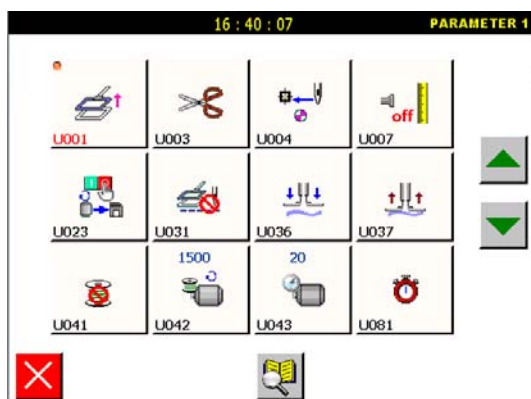
Entering the parameter set




- Press  and **Param.** on main menu screen, then enter the parameter select screen.







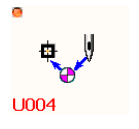


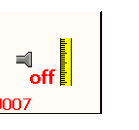



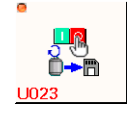





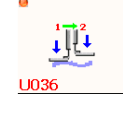
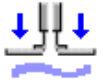
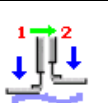
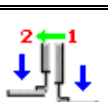
- There are three kinds of parameter. Press  /  /  and enter corresponding screen to set parameter.











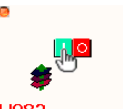









注 Caution: After setting parameter, press  or the system will not store the input parameter.







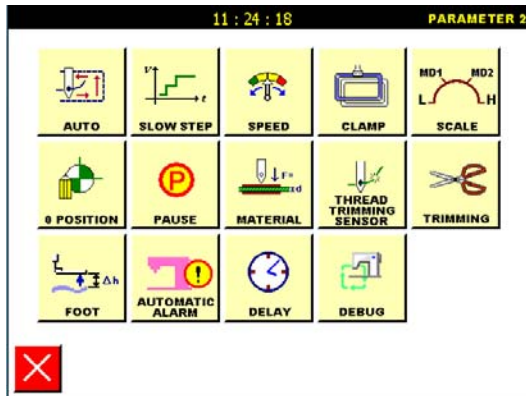
- Press , and enter Parameter one.


Parameter One list

 <p>U001</p>		Lift clamp after automatic processing
		Don't lift clamp after automatic processing
 <p>U003</p>		Automatic trimming after processing
		Forbid trimming after automatic processing
 <p>U004</p>		Return to (the second)home position after automatic processing
		Return to home position at first,then go to the second home position after automatic processing
 <p>U007</p>		Indicator light of assistant is off
		Indicator light of assistant is sustained light
		Indicator light of assistant is on
 <p>U023</p>		Save current speed setting before power off
		Don't save current speed setting before power off
 <p>U031</p>		Forbid sewing when clamp is lifting
		Permit sewing when clamp is lifting
 <p>U036</p>		The left part and the right part of clamp descend together
		Left part of clamp descends first,and right part of clamp descends next
		Right part of clamp descends first,and left part of clamp descends next

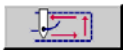
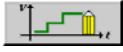

 <p>U037</p>		Lift clamp after automatic processing
		Don't lift left part of clamp after automatic processing
		Don't lift right part of clamp after automatic processing
 <p>U041</p>		Permit bobbin winding operation
		Forbid bobbin winding operation
 <p>U042</p>		The speed of principal axis winding. RANGE:200~2500r/min
 <p>U043</p>		Bobbin winding operation durative time(s). RANGE:0~255s
 <p>U081</p>		Permit timing at working
		Forbid timing at working
 <p>U082</p>		Counter reset at power on
		Remain counting at power on
 <p>U083</p>		Forbid working after counting arriving at limit
		Permit working after counting arriving at limit
 <p>U084</p>		Available counting
		Invalid counting
 <p>U131</p>		Counter of suture ON
		Counter of suture OFF


























 <p>U132</p>		Reset suture counter at power on
		Remain suture counter at power on
 <p>U133</p>		Forbid working after counter arriving at limit
		Permit working after counter arriving at limit
 <p>U141</p>		Needle switch to UP position at power on
		Remain needle current position at power on
 <p>U142</p>		Return to home position at power on
		Remain current position at power on
 <p>U143</p>		Main axis motor locked at power on
		Main axis motor loose at power on
 <p>U144</p>		Lift press foot at power on
		Lower press foot at power on
 <p>U151</p>		The time of LCD's light on
		The time of LCD's light is off
 <p>U152</p>		<p>During the regulatable time,the LCD's light will be turnoff if the screen hasn't be press</p> <p>RANGE:0~60min</p>




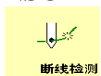

- Press , and input the password, then enter parameter two.
























Parameter Two list


AUTO 	U002 Autorun at uniform speed	ON The speed of fees is uniform
		OFF The speed of principal axis is uniform
	U005 Sewing area limit	ON Limit for stitching range is available
		OFF Limit for stitching range is invaild
	U006 Assistant orientation	ON Assistant orientation is OFF
		OFF Assistant orientation is ON
SLOW STEP 	U011 Speed of the first stitch	On the basis of each machine, set the parameter properly.
	U012 Speed of the second stitch	
	U013 Speed of the third stitch	
	U014 Speed of the forth stitch	
	U015 Speed of the fifth stitch	
SPEED 	U021 Upper limit of speed setting	
	U022 Non-stitching feed speed	On the basis of each machine, set the parameter properly.
	U024 Set of jog speed	
	U025 Cursor input low speed	Commend:800
	U026 Cursor input middle speed	Commend:1600
	U027 Cursor input high speed	Commend:2600

CLAMP 	 The order of treadle's operation	 The No.1 treadle controls startup,and the No.2 controls clamp
		 The No.1 treadle operates orderly,and the No.2 operates in reverse order
	 The height of foot's lift up	
	 Pedal operation method with clamp	 Control the action of the big clamp
		 Control the action of the big clamp and the 2 nd -clamp by turn
		 Separate control the action of the master clamp and the separate clamp(left/right)
	 Invalid stitches of the 2 nd -clamp sensor	Commend:0
SCALE 	 The second hight of the clamp	Commend:0
	 Scale of high speed	Commend:100
	 Scale of high middle speed(MD2)	Commend:90
	 Scale of low middle speed(MD1)	Commend:70
HOME POSITION 		 Scale of low speed
	 The action od clamp at home position	 Keep pressing at home position
		 Lift at home position
	 The condition of returning home position	 Permit returning to home position when clamp press down,foot lifting and needle's UP position
		 Permit returning to home position at current state
	 The mode of returning	 The order of returning home position:X—>Y

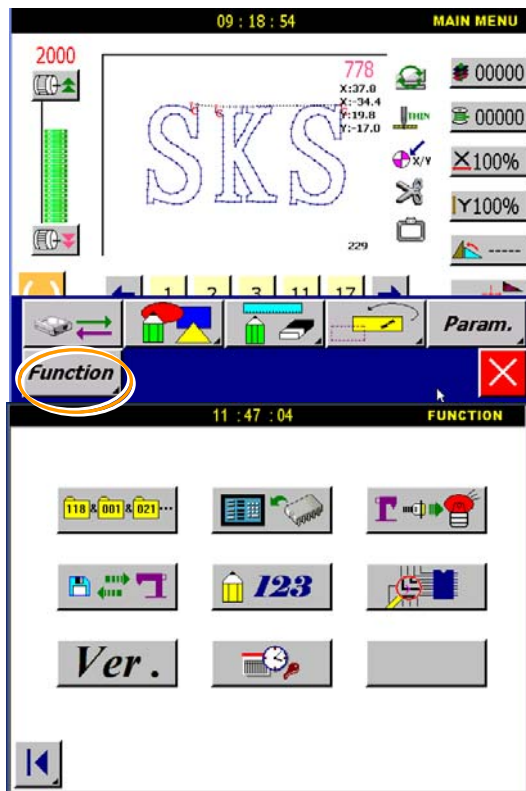
	home position	2ND	The X axis and Y axis return to home position together
		3RD	The order of returning home position:Y→X
	U064 Speed of returning to home position		
PAUSE 	U071 Automatic trim at pause	ON	Permit automatic trim at pause
		OFF	Forbid automatic trim at pause
	U072 Needle's position at pause	ON	Needle stop at UP position at pause
		OFF	Needle stop at DOWN position at pause
	U073 Pause switch two-press operation	ON	Permit two-press operation at pause
		OFF	Forbid two-press operation at pause
	U074 Delay of pause		
	U075 Operation of clamp at pause	ON	Clamp lifting at UPST
		OFF	Clamp keep pressing at UPST
	U076 Type of pause switch	ON	Normal
		OFF	Auto-locked
MATERIAL 	U091 Select sewing material	1ST	Select sewing material_Thick material
		2ND	Select sewing material_Moderate-material
		3RD	Select sewing material_Flimsy material
	U092 Ply of moderate material		Commend:1mm
	U093 Ply of moderate material		Commend:4mm
	U094 Ply of thick material		Commend:7mm


THREAD TRIMMING SENSOR 	U111 The needle thread trimming sensor's ON/OFF	ON The needle thread trimming sensor is available OFF The needle thread trimming sensor is validated
	U112 Thread trimming when the thread trimming sensor detectio	ON The thread trimming when the needle thread trimming sensor detection is available OFF The thread trimming when the needle thread trimming sensor detection is validated
	U113 Invalid stitches of the starting time stitch sensor	Commend:3
	U114 Invalid stitches of the stitch in progress sensor	Commend:2
	U115 Delayed timing for broken thread checking out	Commend:0.2
TRIMMING 	U121 Main axis speed for trimming	Commend:260mm/min
	U122 Delayed timing before trimming	Commend:0.12s
	U123 Wiping durable before trimming	Commend:0.03s
	U124 Turn-off time for wiping	Commend:0.12s
	U125 Permit/forbid trim at moving	ON Permit trimming at moving
		OFF Forbid trimming at moving
	U126 Set of wiper	ON Available wiper at trimming

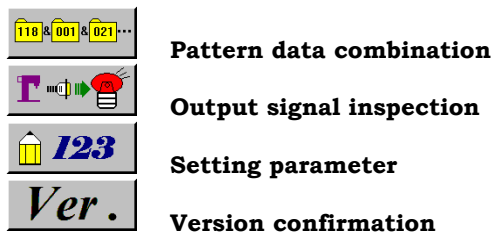
		 Invalid wiper at trimming
	 Thread release output delay time	Commend:0S
	 Needle position after trimming	 Hold Current position after trimming
		 Reverse needle lifting operation after thread trimming
FOOT 	 Usual height of foot when it's fall	
	 Height of foot 1	
	 Height of foot 2	
	 Height of foot 3	
	 Height of foot 4	
ALARM 	 Type of automatic alarm	 The automatic of alarm is OFF
		 The automatic alarm is ON
		 The alarm appears when the screen is being refreshed
	 The durative time of automatic alarm	
	 The periodic time of automatic alarm	
DELAY 	 Delay of foot down	
	 Delay of clamp	
	 Delay of foot up	
	 Delay assistant orientation (1)	

	<div>Assistant orientation (2)</div>	Delay assistant orientation (2)	
<div>DEBUG</div> <div><div>试机模式</div></div>	<div>DELAY OF AUTORUN</div>	Delay of autorun	

9 ASSISTANT FUNCTION



- Press  and **Function** on main menu screen to open the assistant function selecting screen.

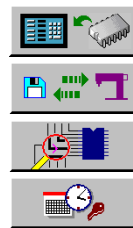


Pattern data combination

Output signal inspection

Setting parameter

Version confirmation



Resuming default parameter

Reduction/spare parameter

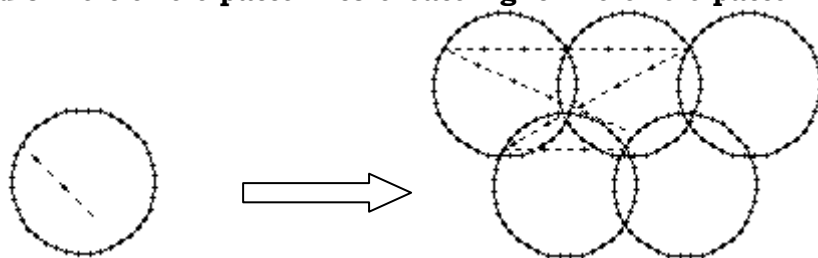
Input signal inspection

Resetting date

9.1 GROUP PATTERN DATA MACROPROCESSOR

The system is based on current single pattern to create group pattern data. The group pattern is also called sub-data.

[Example] Based on left circle pattern to create right five-circle pattern.



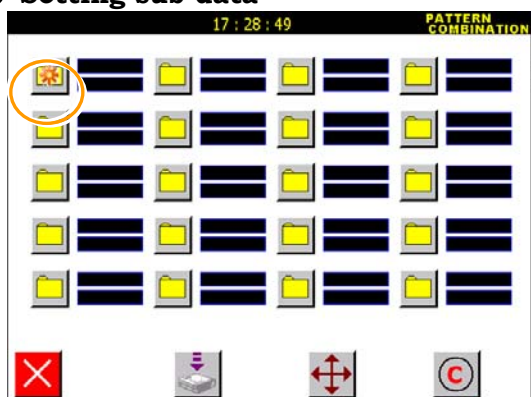
[Operation details]


- ① **Selecting macroprocessor**



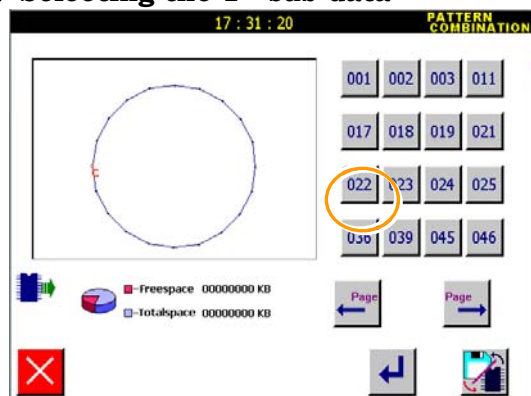
- Press  to create pattern.

② Setting sub-data



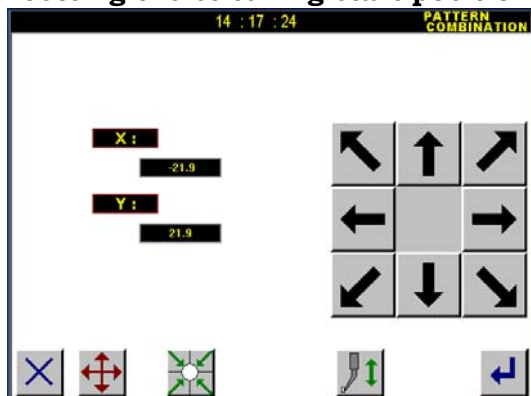
- Press data with  to set the 1st sub-data and enter sub-data selecting.


③ Selecting the 1st sub-data



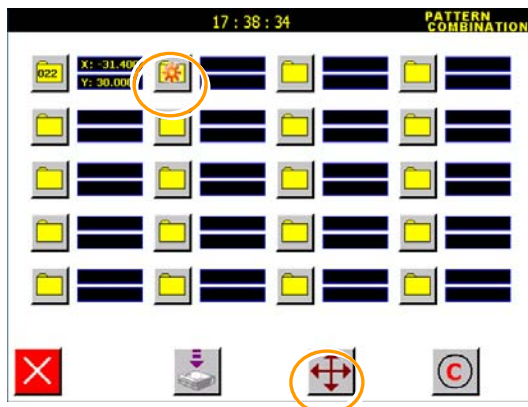
- Press the 1st sub-data to enter the stitch start position setting screen.


④ Setting the stitching start position of the sub-data




- Use direction key to set the stitching start position of the 1st circle.
- Press  to confirm and return to set the 2nd sub-data.

⑤ Setting the 2nd sub-data

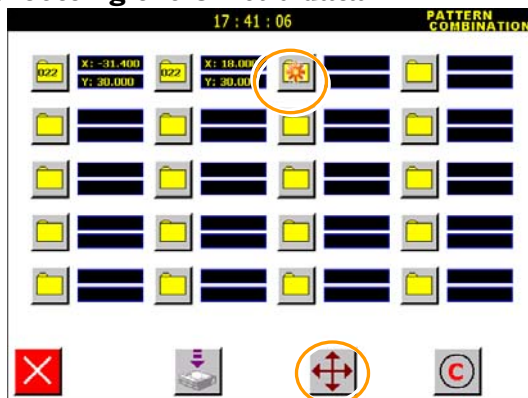



- Press  to confirm the pattern data. If the above sub-data setting is wrong, set again.


- Press data with  and set the 2nd sub-data. Enter the sub-data selecting.

⑥ The 2nd sub-data selecting and stitch start position is the same as the ③ and ④.

⑦ Setting the 3rd sub-data



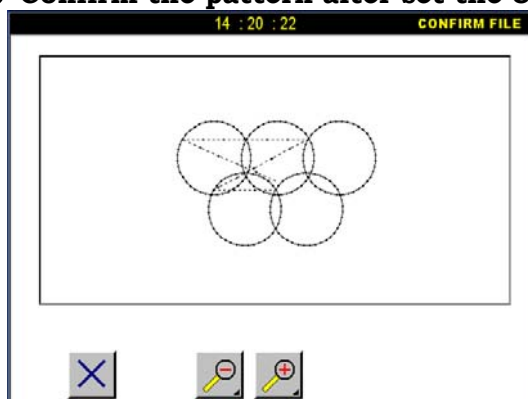
- Press  to confirm the pattern data. If the above sub-data setting is wrong, set again.


- Press data with  and set the 3rd sub-data. Enter the sub-data selecting.

⑧ The 3rd sub-data selecting and stitch start position is the same as the ③ and ④.

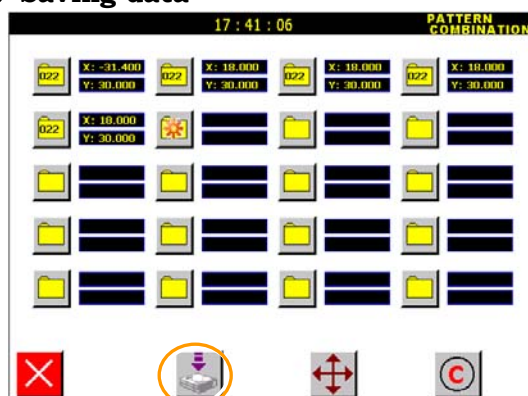
⑨ Set the 4th and 5th sub-data.


⑩ Confirm the pattern after set the 5th sub-data.

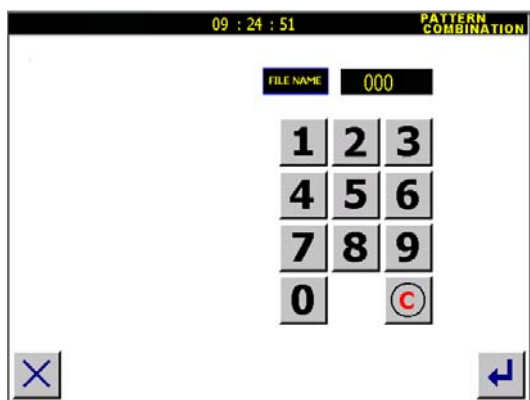


- Press  and return to sub-data list screen.




(II) Saving data




- Press  to enter pattern data store screen.

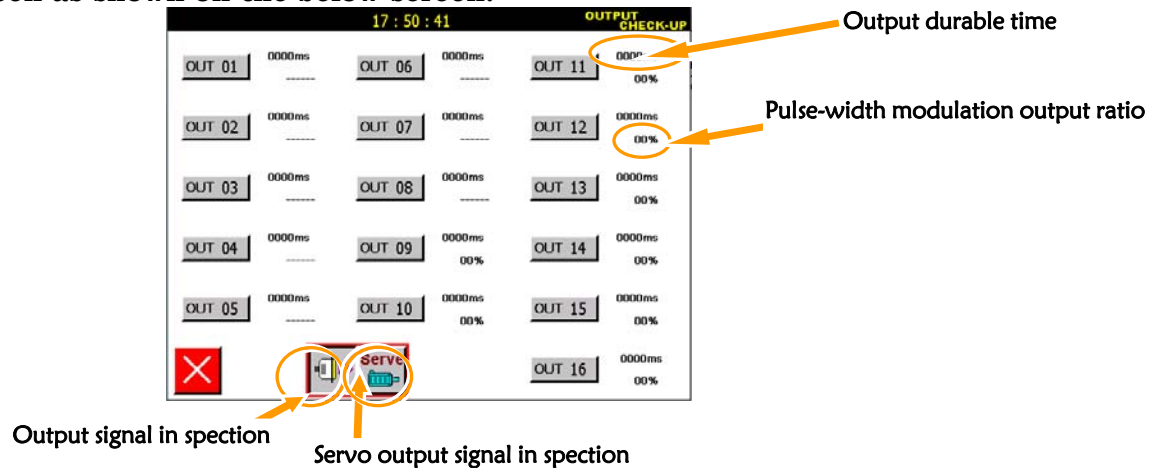


注 Caution:

- (1) When the pattern data is selected as sub-data, the code data is all saved except the second home position function. If add the second home position in new data please refer to 6.12.
- (2) Stitch length of sub-data is not changed in new creation pattern.
- (3) The new creation pattern only realizes ,  and  functions.

9.2 OUTPUT SIGNAL INSPECTION

Press  on assistant function selecting screen and open the output signal inspection screen as shown on the below screen.

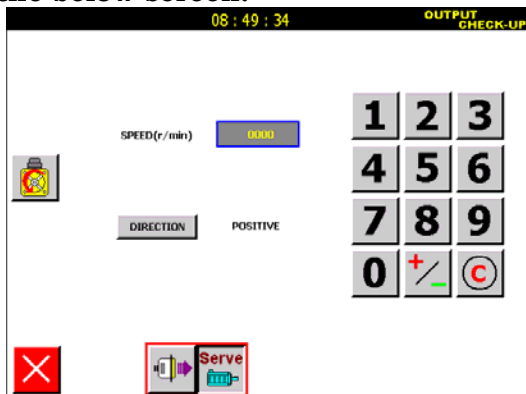





9.2.1 OUTPUT SIGNAL

OUT 01	Clamp signal	OUT 02	Presser foot
OUT 03	Triming signal	OUT 04	Wiping signal
OUT 05	Releasing signal		


9.2.2 SERVO SIGNAL

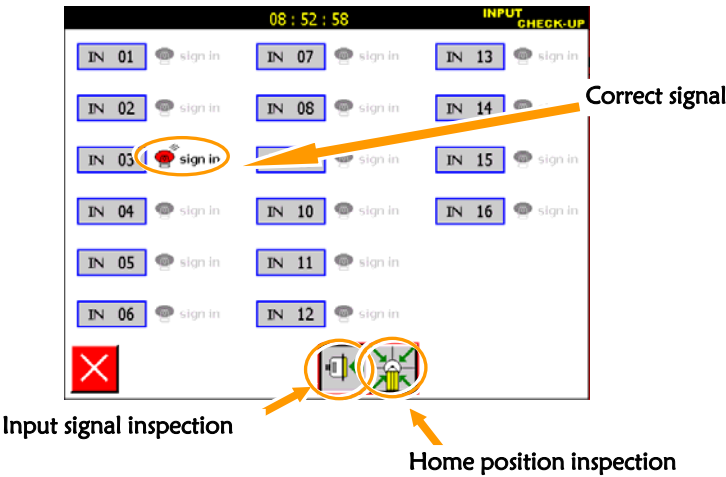
Press  on the above screen and open the servo output inspection screen as shown on the below screen.



- Use numeric key to input rotation.
- Use  to change the rotation direction.
- Press  to confirm the motor run.
- Press  to open the output inspection screen.

9.3 INPUT SIGNAL INSPECTION

Press  on assistant function selecting screen and open the output signal inspection screen as shown on the below screen.



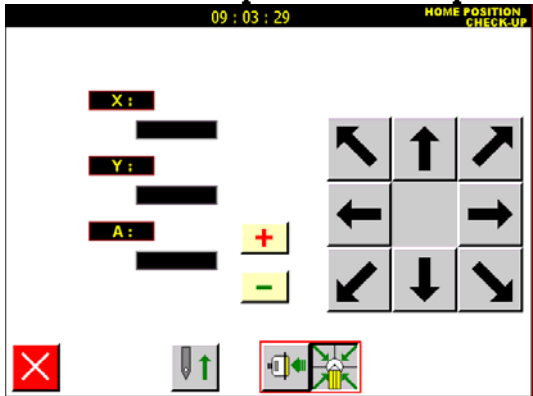
9.3.1 INPUT SIGNAL


Enter the above screen and press the relative key to confirm the <signal in> sign on screen. If there is no changing, please confirm the linkage.

Key	Input No.	Signal
Runing pedal	Input 1	Automatica running
Clamp pedal	Input 2	Clamp operation
Pause	Input 3	Pause
Spare	Input 4	Spare
Broken thread inspection	Input 5	Broken thread inspection signal


9.3.2 HOME POSITION SIGNAL

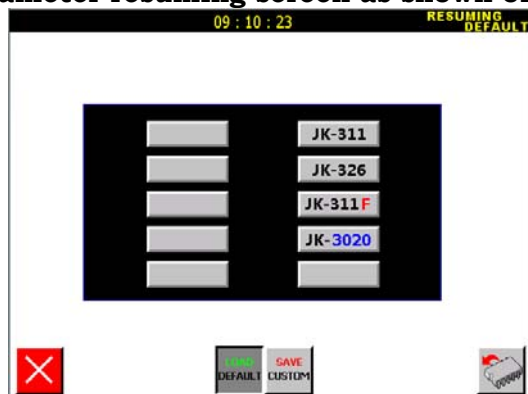
Press  and open the home position inspection screen.




- Use arrow key to find the home position signal. If there is signal, the LCD will display <signal in> on relative direction. If there is <signal in> on X、Y and A directions, the home position signal is correct.
- Press  and open the input inspection screen.

9.4 RESUMING DEFAULT PARAMETER


Press  on assistant function selecting screen and open the default parameter resuming screen as shown on the below screen.

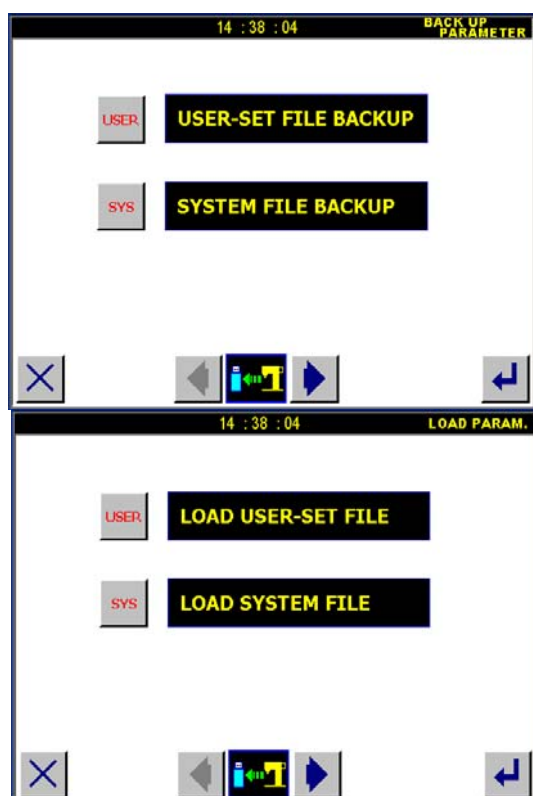









- Press the corresponding parameter to confirm **Select** parameter.
- Press  to confirm.

Caution: Only professional maintainer operates fault parameter loading. Before load fault parameters, record the angle parameter.


9.5 REDUCTION/SPARE PARAMETER

Press  on assistant function selecting screen and open the reduction/spare parameter screen as shown on the below screen.



- Use  and  to switch of reduction / spare parameter function.
-  Spare the parameter from sartorial machine to exteriorl memory.
-  Reduce the parameter from exteriorl memory to sartorial machine.
-  /  Select user parameter or system parameter.
- Press .

9.6 PASSWORD MODIFYING FUNCTION

Press  on assistant function selecting screen and open the password modifying function screen as shown on the below screen.

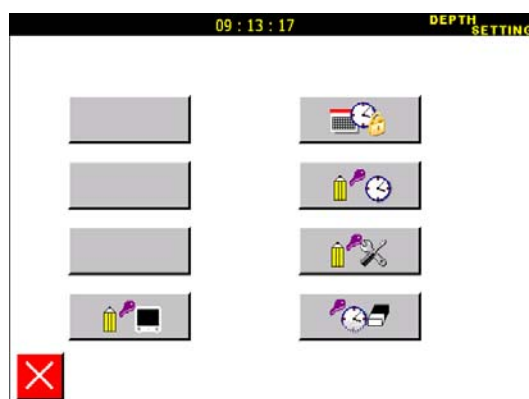


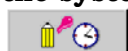
Illustration 9.5-1



Caution: This function is used for modifying <entrance system parameter word> (4-bit) and <operation day password> (8-bit).



—— Set operation day. Input <operation day password> correctly when enter the system, or it will not enter.



—— Modify <operation day password>.



—— Modify <entrance system parameter password>.




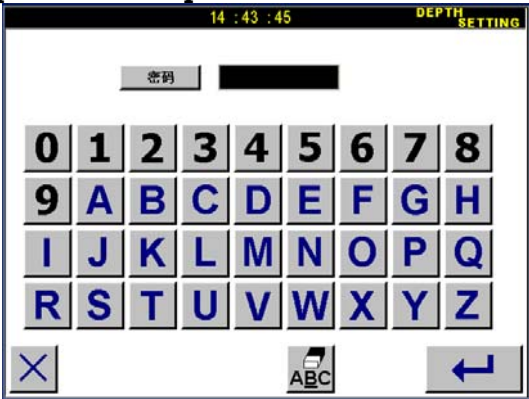
—— Resume the default setting of <operation day password>.



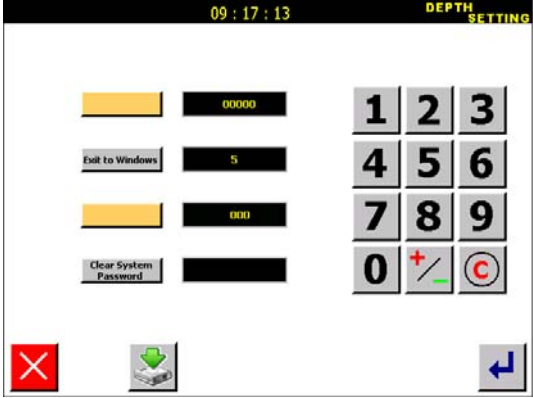
—— Modify<entrance parameter two password>.


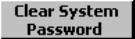
9.6.1 SETTING OPERATION DAYS

In illustration 9.5-1, press  and enter the operation day setting. At first, enter the <operation day password> input screen as shown on the below screen.




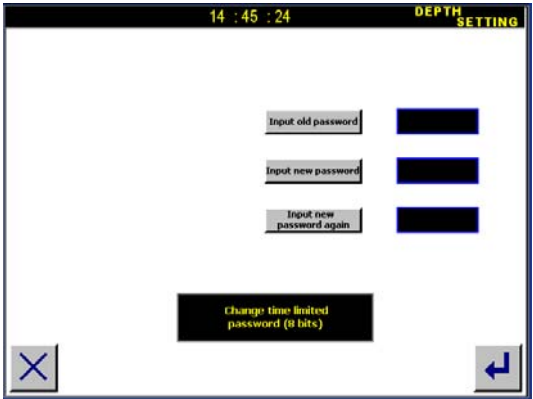
After input the correct password and enter the below screen:



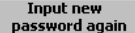


- Use numeric key to input the available operation day.
- Press , and when count backwards to 0, the system will close the program and return to windows screen.
- Press , resume the default setting of <entrance system parameter password>.


9.6.2 MODIFYING <OPERATION DAY PASSWORD>

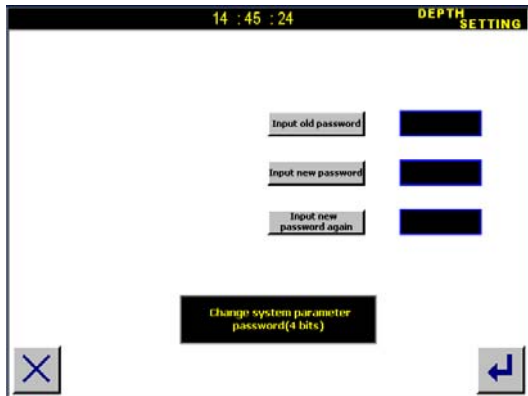
In illustration 9.5-1, press  and enter the modifying <operation day password> screen as shown on the below screen.



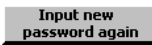


- Press  and open the password input screen. Input current password and confirm.
- Press  and open the new password input screen. Input new password and confirm.
- Press  and open the new password confirm input screen, input the new password and confirm. The new password setting is available.


9.6.3 MODIFYING <ENTRANCE PARAMETER PASSWORD>

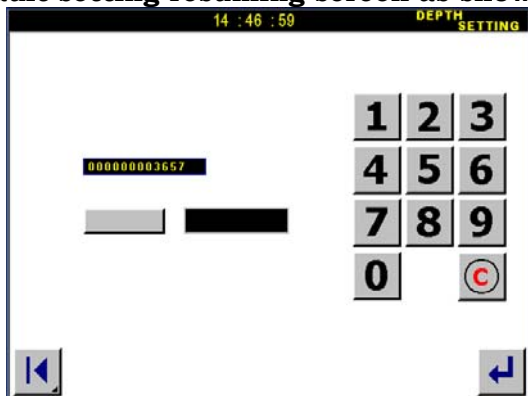
In illustration 9.5-1, press  and enter the modifying <entrance parameter password> screen as shown on the below screen.



- Press  and open the password input screen. Input current password and confirm.
- Press  and open the new password input screen. Input new password and confirm.
- Press  and open the new password confirm input screen, input the new password and confirm. The new password setting is available.

9.6.4 RESUMING DEFAULT SETTING OF <OPERATION DAY PASSWORD>

In illustration 9.5-1, press  and enter the <entrance parameter password> default setting resuming screen as shown on the below screen.



- Use numeric key to input password and press enter key. When black screen displays SUCCESS, use day password to resume the default value 00000000.



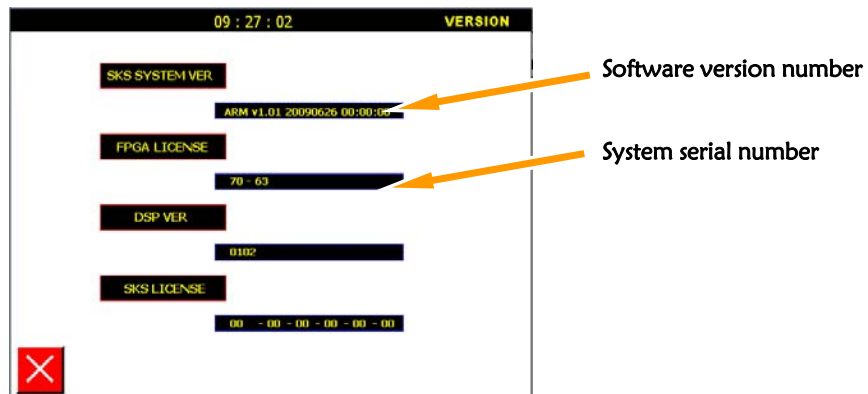
Caution: If you need the relative password, please give us the numbers in black screen

000000002996

, we will provide your password immediately.

9.7 VERSION CHECK

Press **Ver.** on assistant function selecting screen, and open the version checking function screen as shown on the below screen.



[Appendix 1] Alarming explanation (system)

Message code: 00001

The message code displays as below.

It's too fast to finish the stitch. Please lower or check the machine.

Analyzing:

- (1) Main axis rotates so fast that the pattern data cannot accept.
- (2) The system alarms, because the main axis locks or the stitching line enwind to make system overloading running.

Troubleshooting:

- (1) If select the speed to create pattern data at the 1st time, please refer to the speed index to reduce speed.
- (2) If problem occurs casually, please check machine state to make sure.

Explanation:

Main axis lock: The main axis can not rotates stably because of wrong fix.

Message code: 00003

The message code displays as below.


Oversteps the area limit. Please return to home position at first.

Analyzing:

- (1) The pattern data stitching range oversteps the designed range.
- (2) The system can not carry out stitching because the over-limit parameter of system is changed .

Troubleshooting:

[Operation details]

- ① Press  to cancel over-limit state and make sure the over-limit parameter setting.
- ② After confirm the over-limit parameter, make sure the pattern data setting. Recompile or amend according to pattern data.

Message code: 00004

The message code displays as below.

Principal axis's drive alarms. Please turn off the power at first and turn on it again after one minute.

Analyzing:

The system alarms, because the main axis locks or the stitching line enwind to make system overloading running.

Troubleshooting**[Operation details]**

- ① At first, press main axis alarming cancel key on system control box.
- ② Get rid of the main axis overloading factors, adjust the main axis or check the cloth and stitching line.
- ③ Get rid of the alarming factors, reset the alarming cancel key for system running.

Message code: 00005

The message code displays as below.

Program is wrong. Please create again.

Analyzing

- (1) The data may be damaged and unrecognized if wrong shutdown when the pattern data running.
- (2) The system can not recognize the pattern data which is not created by itself.

Troubleshooting:

Delete the pattern data and recreate.

Message code: 00006

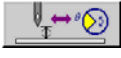
The message code displays as below.

The angle set of feed permitted /forbidden is wrong.

Analyzing:

The system can not run because feed angle parameter setting () is wrong.

Troubleshooting:

Make sure the angle setting () is right. (Please refer to 10.1 ANGLE SETTING)



注 **Caution:** Please not set parameter at random. Wrong setting will cause bad running. or equipment damage. If you have question, please contact with local agent.

Message code: 00007

The message code displays as below.

The counter and suture counter arrives the upper limit.

Analyzing:

Set <Forbid working after counting arriving at limit> on counter parameter  of user parameter . When system products reach the designed amount, the system will automatically stop and alarm. (Please refer to 8 PARAMETER SET (USER PARAMETER))

Troubleshooting:



After alarming, the system will reset counter.

Message code: 00008

The message code displays as below.

Thread was broken.

Analyzing:

Set <Stitching line checking> on stitching line checking  of user parameter .

When stitching line breaks, the system will alarm.

Troubleshooting:

Press self-lock key and replace stitching line.

Message code: 00009

The message code displays as below.




Time limit is arrived.

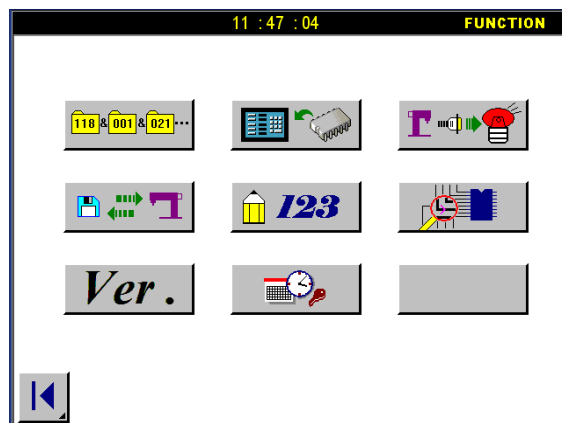
Analyzing:

Time limit is arrived. Please reset.

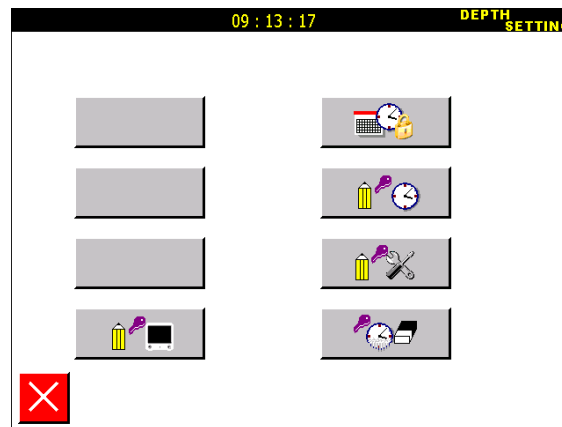
Troubleshooting:

[Operation details]

① Press  and  on menu screen to enter the assistant function. Press  to enter the advanced function.



③ Press  to enter the time limit set.



③Please refer to 9.6.1 SETTING OPERATION DAYS.

Message code: 00010

The message code displays as below.

Lack of source. Please install software again.

Analyzing:

- (1) The system data damages because system wrong running or shutdown.
- (2) Incomplete installation leads to lack of data.

Troubleshooting:

Please contact our agents to reinstall system software.

Message code: 00012

The message code displays as below.

Must return home position before rework.

Analyzing:

If the system don't return origin position before rework, the system carries out over-limit alarm when running .

Troubleshooting:

Press  and return origin position. Then, rework.

Message code: 00999/01021

The message code displays as below.

System has a mistake. Please turn off the power at first and open it after one minute.

Operation of memory is wrong. Please turn off the power at first and open it after one minute.

Analyzing:

The system start is wrong.

Troubleshooting:

System stop. After one minute, restart the system.

Message code: None

The message code displays as below.

Pitch distance is zero, and could not input data.

Stitch length is zero, and could not input data.

Analyzing:

Stitch length input is wrong.

Troubleshooting

Amend stitch length and input data again.

Message code: None

The message code displays as below.

The distance between two points could not be more than 12.7 mm in point input mode.

Three inputted points could not in the same line in circle input mode.

The number of inputted points is not enough to finish curve program in curve input mode. Please input again.

Troubleshooting:

The system will return to the below certain point and input again.

Message code: None

The message code displays as below.

The number of inputted points could not more than 128 in polygon input / curve input mode.

Troubleshooting:

Reduce polygon / curve input points.

Message code: None

The message code displays as below.

Please return home position before input data.

Troubleshooting:

Press 

Message code: None

The message code displays as below.

The file is out of range.

Troubleshooting:





Press  to delete inputted data or create again.

Message code: None

The message code displays as below.

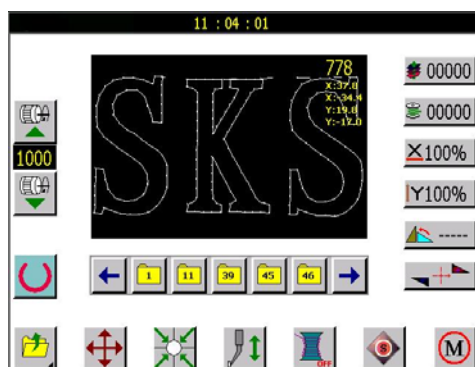
Enter the jogging mode when the display of x/y axis's coordinates are zero, namely it is just be confirmed input and doesn't move yet.

Troubleshooting:

Confirm current input (press  or ) to enter jogging mode. If not confirm current input, press  (feeding/ point /linear/ circle) or  (polygon / curve) to return to the above confirm point.

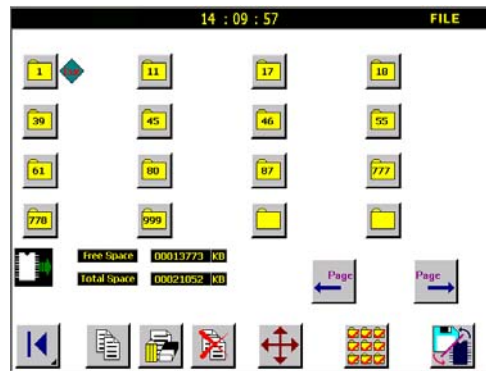
[Appendix 2] APPENDIX LIST OF KEYS

Standard panel



	VARIOUS MENUS ARE DISPLAYED		RETURNED TO HOME POSITION
	IMAGE SCREEN IS DISPLAYED		INCREASE SEWING MACHINE SPEED
	DECREASE SEWING MACHINE SPEED		PAGE DOWN
	CLOSE		MOVES IN NEGATIVE DIRECTION (JOG)
	MOVES IN POSITIVE DIRECTION (JOG)		PRESSER BAR LIFTING IS MOVED UP/DOWN
	DISPALYES THE PREVIOUS FILE PAGE AREA		DISPLAES THE NEXT PROGRAM AREA
	DISPLAY FILE NUMBER		ENTERS/ CLOSE THE WINDER MODE
	NEEDLE FOOT IS MOVED UP		NEEDLE FOOT IS MOVED DOWN
	RETURNS TO PREVIOUS SCREEN		PAGE UP
	MANUAL MODE		PATTERNED DATA IS READ/DELETED
	PATTERNED DATA IS INPUTTED (CREATED)		PATTERNED DATA IS MODIFIED
	DATA IS CONVERTED		USER PARAMETER IS SET
	SYSTEM PARAMETER IS SET		ASSISTANT FUNCTION































Pattern Data Read/ Delete

















	SWITCH OF CF CARD AND USB		SELECT ALL
	COPYS PATTERN DATA		SETTING PATTERN DATA IS DELETED
	RENAME		PAGE UP
	PAGE DOWN		




Input mode

	FEED DATA INPUT		STRAIGHT LINE INPUT
	POINT INPUT		CURVE INPUT
	ARC INPUT		CIRCLE INPUT
	BROKEN LINE INPUT		REVERSE MULTIPLE (FEED)
	REVERSE MULTIPLE (SEWING)		ZIGZAG SEWING
	ZIGZAG IS NOT SET		ZIGZAG DATA IS MADE AT THE LEFT
	ZIGZAG DATA IS MADE AT THE CENTER		ZIGZAG DATA IS MADE AT THE RIGHT
	DETAILS OF ZIGZAG SEWING IS SET		DETAILS OF BACK TACKING SEWING IS SET
	DETAILS OF MULTIPLE/OFFSET IS SET		BACK TACKING SEWING
	BACK TACKING SEWING IS NOT SET		V BACK TACKING
	N BACK TACKING		W BACK TACKING
	M BACK TACKING		MULTIPLE/ OFFSET IS NOT SET

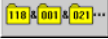











	MULTIPLE SEWING (SEWING)		MULTIPLE SEWING (FEED)
	MULTIPLE BACK TACKING STITCH		1 STITCH MULTIPLE BACK TACKING
	2 STITCH MULTIPLE BACK TACKING		3 STITCH MULTIPLE BACK TACKING
	4 STITCH MULTIPLE BACK TACKING		OFFSET INPUT IS DONE
	OFFSET DATA IS MADE AT THE RIGHT		OFFSET DATA IS MADE AT THE LEFT
	MULTIPLE IS MADE AT THE RIGHT		MULTIPLE IS MADE AT THE LEFT
	CLOTH THICKNESS SET (0 to 3 mm)		THICKNESS SET (3 to 6 mm)
	THICKNESS SET (6 to 8 mm)		SPEED SET
	MACHINE SPEED IS MADE LOW SPEED		MACHINE SPEED IS MADE MEDIUM-LOW SPEED
	MACHINE SPEED IS MADE MEDIUM-HIGH SPEED		MACHINE SPEED IS MADE HIGH SPEED
	FOLLOWING THE TRACKS AND MOVES		MOVES IN THE STRAIGHT LINE
	WEIGHT SET (LIGHT)		WEIGHT SET (STANDARD)
	WEIGHT SET (HEAVY)		ENTER OPERATIONS.) (FIXED
	CANCEL AND RETURN TO ORIGINE DATA		SAVE PATTERN DATA
	CODE DATA INPUT		CANCEL INPUT

Modify mode















	ADDS SEWING STITCH		SAME LENGTH STITCH IS ADDED BY ONE
	MODIFYS SPEED		MOVEMENT IN BLOCK
	CODE DATA ADDED		CODE DATA IS MODIFIED
	ALL DELETED AFTER POSITION SETTING		CODE DATA DELETE
	STITCH DELETE		SETTING STITCH DELETE
	STITCH POSITION IS CHANGED		PATTERN MOVE AFTER CORRECTING
	PATTERN FIXING AFTER CORRECTING		START POSITION IS MOVED

	STITCHING LENGTH IS CHANGED		PITCH CHANGED AFTER SPECIFY
	ALL PITCH CHANGED AFTER SPECIFY		











ASSISTANT FUNCTION

	PATTERN COMBINATION DATA		RESUMING DEFAULT PARAMETER
	OUTPUT SIGNAL INSPECTION		REDUCTION/SPARE PARAMETER
	PARAMETER SET/CHANGED IS		INPUT SIGNAL INSPECTION
	VERSION CONFIRMATION		RESETTING DATE
	MOTOR RUNNING		OUTPUT SIGNAL
	HOME POSITION SIGNAL		INPUT SIGNAL

USER PARAMETER SETTING

	AUTOMATIC RUNNING PARAMETER		SLOW START PARAMETER
	SPEED SETTING PARAMETER		CLAMP PARAMETER
	SUTURE INSPECTION PARAMETER		BROKEN THREAD CHECK OUT
	REVERSE CLEARANCE		COUNTER
	TRIMING PARAMETER		BOBBIN PARAMETER
	FEED MODE		HOME POSIRION PARAMETER
	PAUSE PARAMETER		POWER ON PARAMETER

PAREMETER SETTING KEYS

	ANGLE SETTING		DIGITAL INPUT SETTING
	DIGITAL OUTPUT SETTING		OVERSETP LIMIT SETTTING
	MOTOR RUNNING DIRECTION SETTING		DELAY SETTING
	MOVEMENT CONTROL PANEL PASSWORD SETTING		AUTOMATIC STEP LENGTH SETTING
	PROGRAM UPDATING		PARAMETER STORING

	MOVEMENT PANEL RESET	CONTROL		
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