

**User's Manual  
(operating of touch screen)**

**GARUDAN<sup>®</sup>**

**GPS/F-1006  
series**



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## Foreword

Thank you for using our Computerized Control System for Special Sewing Machine.

It is appreciated that you do read this manual carefully in order to operate the machine correctly and effectively. If the user operates the machine contrary to regulations herein, thus cause loss to user or third party, we will not take responsibility. Besides, you should keep this manual for future use. For any fault or problem of machine, please ask the professionals or the technicians authorized by us for repair service.






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## Safety Matters for Attention





### 1. Signs & Definitions of Safety Marks














This User's Manual and the Safety Marks printed on the products are to enable you to use this product correctly so as to be away from personal injury. The signs and definitions of Marks are shown in below:

 危険 Danger	The incorrect operation due to negligence will cause the serious personal injury or even death.
 注意 Caution	The incorrect operation due to negligence will cause the personal injury and the damage of mechanism.
	This kind of marks is "Matters for Attention", and the figure inside the triangle is the content for attention. (Exp. The left figure is "Watch Your Hand!")
	This kind of mark is "Forbidden".
	This kind of mark means "Must". The figure in the circle is the contents that have to be done. (Exp. The left figure is "Ground!")

### 2. Safety Matters for Attention

 危険 Danger	
	For opening the control box, please turn off the power and take away the plug from socket firstly, and then wait for at least 5 minutes before opening the control box. Touching the part with high voltage will cause the person injury.
 注意 Caution	
<b>Usage Environment</b>	
	Try not to use this sewing machine near the sources of strong disturbance like high-frequency welding machine. The source of strong disturbance will affect the normal operation of the sewing machine.
	The voltage fluctuation shall be within 20% of the rated voltage. The large fluctuation of voltage will affect the normal operations of sewing machine, Therefore a voltage regulator is needed in that situation.
	Working temperature: 5°C~35°C. The operation of the sewing machine will be affected by environment with temperature beyond the above range.
	Relative Humidity: 45%~85%(No dew inside the machine), or the operation of sewing machine will be affected.
	The supply of compressed gas shall be over the consumption required by the sewing machine. The insufficient supply of compressed gas will lead to the abnormal action of sewing machine.
	In case of thunder, lightning or storm, please turn off the power and pull plug out the socket. Because these will have influence on the operation of sewing machine.
<b>Installation</b>	
	Please ask the trained technicians to install the sewing machine.
	Don't connect machine to power supply until the installation is finished. Otherwise the action of sewing machine may cause personal injury once the start switch is pressed at that situation by mistake.

	When you tilt or erect the head of sewing machine, please use both of your hand in that operation. And never press the sewing machine with strength. If the sewing machine loses its balance, it will fall into floor thus causes the personal injury or mechanical damage.
	Grounding is a must. If the grounding cable is not fixed, it may cause the electric-shock and mis-operation of machine
	The entire cables shall be fixed with a distance at 25mm away from the moving component at least. By the way, don't excessively bend or tightly fixed the cable with nails or clamps, or it may cause the fire or electric shock.
	Please add security cover on the machine head.

<b>Sewing</b>	
	This sewing machine can only be used by the trained staff.
	This sewing machine has no other usages but the sewing.
	When operating the sewing machine, please remember to put on the glasses. Otherwise, the broken needle will cause the personal injury in case the needle is broken.
	At following circumstances, please cut off the power at once so as to avoid the personal injury caused by the mis-operation of start switch: 1. Threading on needles; 2. Replacement of needles; 3. The sewing machine is left unused or beyond supervision
	At working, don't touch or lean anything on the moving components, because both of the above behaviors will cause the personal injury or the damage of the sewing machine.
	During working, if the mis-operation happens or the abnormal noise or smell is found at the sewing machine, user shall cut off the power at once, and then contact the trained technicians or the supplier of that machine for solution.
	For any trouble, please contact the trained technicians or the supplier of that machine.
<b>Maintenance &amp; Inspection</b>	
	Only can the trained technicians perform the repair, maintenance and inspection of this sewing machine.
	For the repair, maintenance and inspection of the electrical component, please contact the professionals at the manufacturer of control system in time.
	At following circumstances, please cut off the power and pull off the plug at once so as to avoid the personal injury caused by the mis-operation of start switch: 1. Repair, adjustment and inspection ; 2. Replacement of the component like curve needle, knife and so on
	Before the inspection, adjustment or repair of any gas-driven devices, user shall cut off the gas supply till the pressure indicator falls to 0.
	When adjusting the devices needing the power supply and gas supply, users can't be too careful to follow the entire Safety Matters for Attention.
	If the sewing machine damages due to the unauthorized modification, our company will not be responsible for it.

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# 1 General Information

## 1.1 General

GPS/F-1006 Series Computerized Control System for Industrial Sewing Machines: 1) Adopt the world leading AC servo control technology on main shaft motor, which features high torque, good efficiency, stable speed and low noise; 2) Diversified design of control panel can meet the special requirement of users on attachment; 3) System adopts German style structure, which offers easy installation and maintenance to users; 4) The control software can be updated through remote communication system, which helps users to improve the function of products constantly.

## 1.2 Functions & Parameters

Type of Controller	Computerized Pattern Sewing Machine
Sewing Range	X(Lateral Direction) : 100 x Y(Longitudinal Direction) : 60
Max. Sewing Speed	: 2700rpm(Sewing pitch below 3mm)
Stitch Length	0.1~12.7mm(Min. Resolution: 0.10mm)
Type of Feeding Motion	Intermittent feed (Pulse Motor 2-shaft Driving)
Needle Bar Stroke	41.2mm
Needle	DP×5、DP×17
Lift of Feeding Frame	Standard 18mm Max. 22mm(Pneumatic type Max. 25mm)
Needle Bar Stroke	Standard 4mm(0~10mm)
Lift of Intermediate Presser	20mm
Shuttle	Double-capacity Semi-rotary Shuttle
Memory of Pattern Data	U Disk
Pause	Stop the machine during the process of sewing
Enlarging / Reducing Function	Allows a pattern to be enlarged or reduced on the X axis and Y axis independently when sewing a pattern. Scale : 1% to 400% times (0.1% for each step)
Enlarging/ Reducing Method	Method for enlarging or reducing length of stitch form
Sewing Speed Limitation	: 200~2500rpm(100rpm for each step) : ~
Pattern Selection	Pattern No. selection method
Bobbin Thread Counter	UP/DOWN method (0 to 9,999)
Sewing Counter	UP/DOWN method (0 to 9,999)
2 <sup>nd</sup> Origin Setting	Using jog keys, a 2 <sup>nd</sup> origin (needle position after a sewing cycle) can be set in the desired position within the sewing area.
Sewing Machine Motor	Servo Motor
Needle Highest Position Stop Function	After the completion of sewing, the needle can be brought up to its highest position
Power	500W

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Power Supply Voltage	AC220-240V
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### 1.3 Standardization

The function keys use the general figures with the meaning agreed in the trade. The figures are the internationalized language that users in each country can recognize it.













### 1.4 Operation Method

By adopting the advancing touch-operation technology, the operational interface of SC 440, featuring its user-friendly and easy control provides the innovational changes to user in their daily operations. Users are able to use their fingers or other object to touch the panel so as to finish the operations. However, users shall not touch the panel with the sharp objects at their usage in order to keep the touching panel away from the permanent damage.

## 2 Operation Instruction

### 2.1 General Keys

The keys on interfaces of SP500 for general operations are provided as below:

No	Figure	Function
1		Escape → Quit the existing setting interface. Terminate the changing data in the data changing interface.
2		Enter → Confirm the changed data.
3		Plus → Increase the value
4		Minus → Decrease the value
5		Reset → Release the error
6		Number Input → Activate the number keyboard so that user can input numbers.
7		Ready → Shift between data input interface and sewing interface
8		Information → Shift between data input interface and information interface
9		Communication → Shift between data input interface and communication interface
10		Mode → Shift among data input interface and other detail setting interfaces

### 2.2 Basic Operation

#### ① Turn on the Power

Turn on the power to activate the data input interface.

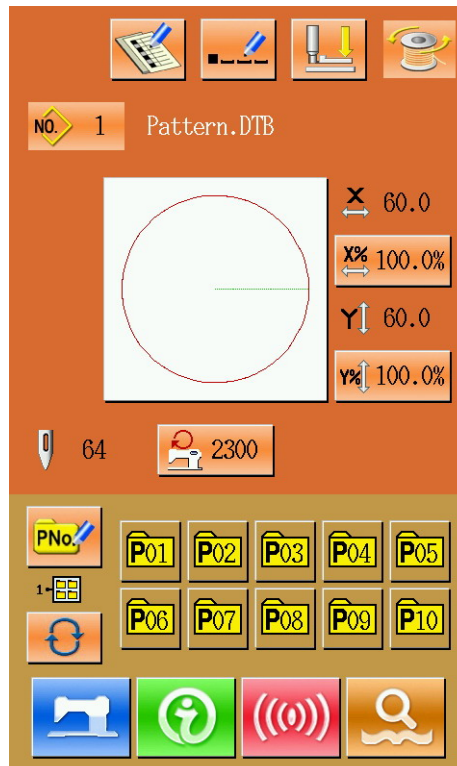
#### ② Select the Number of the Desired Pattern.

At the existing interface, the number of the selected pattern will be displayed. Press




to select the pattern number.

For the operation of the pattern selection, please refer to [2.8 Pattern Selection]

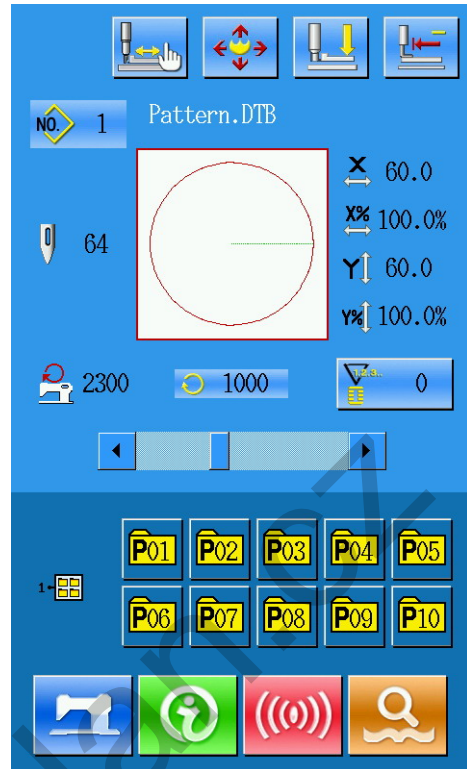


③ Enter the Sewing Ready Status

After the Ready  is pressed, the background color of LCD screen will be turned to blue, which means the machine enters the state of “Sewing Ready”.

④ Start to Sew

Put the sewing material to the presser of machine, step the pedal to low the presser and to start the machine for sewing.



2.3 Operation of Normal Pattern

(1)Interface for Entering Sewing Data

The data input interface is shown as figure at right. For the detail description on functions, please refer to the Table of Function Keys.

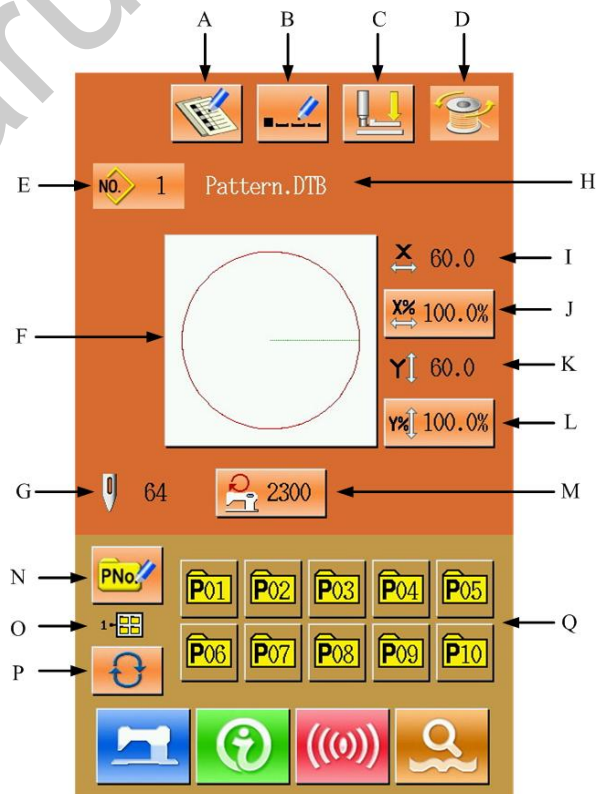




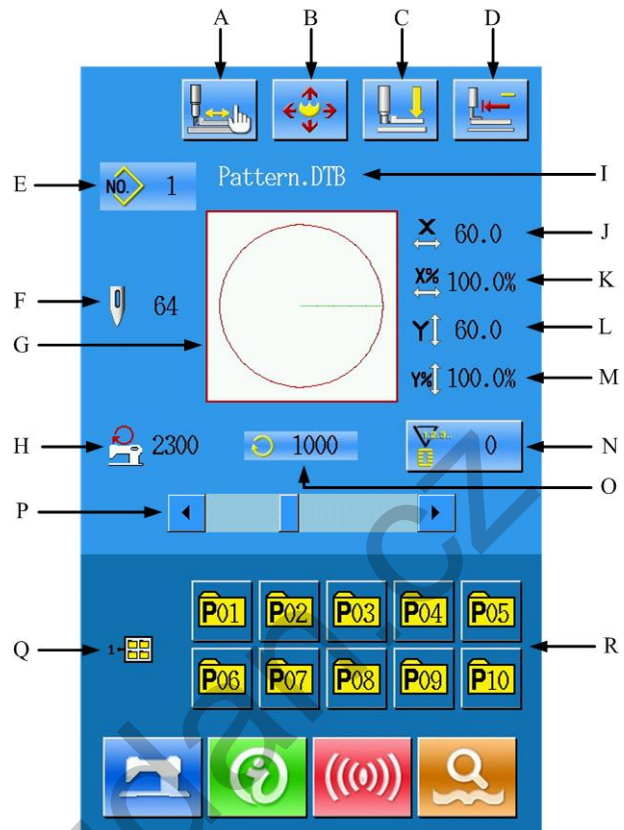
Table of Function Keys:

No.	Functions	Content
A	Pattern Registration	Register 200 normal patterns

B	Pattern Naming	Enable to input 14 figures at most
C	Threading	Lower the intermediate presser after pressing.
D	Winding	Press the Ready  again to carry out the winding operation.
E	Pattern Number Display	Display the pattern number of the existing pattern.
F	Sewing Shape Selection	The shape of the existing pattern is displayed on the key; press it to have access to the pattern selection interface.
G	Pattern Stitch Number Display	Display the sewing stitch number of the existing pattern.
H	Name of Pattern	Display the name of existing pattern
I	X Actual Size Display	Display the actual size of the existing pattern in X direction. Input the actual size via the parameter U64, then the X Actual Size Key will be displayed.
J	X Scaling Rate Setting	The scaling rate of the existing pattern in X direction will be displayed on the Key. Press that key to have access to the setting interface. This is controlled by the parameters U64 & U88.
K	Y Actual Size Display	Display the actual size of the existing pattern in Y direction. Input the actual size via the parameter U64, then the Y Actual Size Key will be displayed.
L	Y Scaling Rate Setting	The scaling rate of the existing pattern in Y direction will be displayed on the Key. Press that key to have access to the setting interface. This is controlled by the parameters U64 & U88
M	Max. Speed Limitation	Display the limitation value of Max. Speed. User can press it for setting this value.
N	Prompt-pattern (P Pattern for short) registration	Used to register P pattern, and 50 patterns can be registered at most
O	P Pattern File Folder Number Display	Display the number of the existing P pattern file folder
P	P Pattern File Folder Selection	Shift the P pattern file folder number orderly.
Q	P Pattern Selection	Display the registered P pattern; press that key to have access to the interface for inputting the P pattern data. This key will not be displayed in the initial status.



## (2)Sewing Interface

Press  to have access to the sewing interface as shown in the right. For detailed function description, please refer to the Table of Function Keys.




**Table of Function Keys:**

No.	Functions	Content
A	Trial Sewing	Press it to have access to the trial sewing interface. To determine the shape of patten with function.
B	Frame-moving	Press this key to lower the feeding presser, and then the system will enter the interface for moving pattern. This is controlled by U89
C	Threading	Press it to lower the intermediate presser.
D	Return to Origin	Press it to make presser return to origin.
E	Pattern Number Display	Display the number of the existing pattern
F	Pattern Stitch Number Display	Display the sewing stitch number of the pattern selected at present.
G	Pattern Shape Display	Display the shape of the pattern selected at present
H	Max. Speed Limitation Display	Display the limitation value of the Max. speed
I	Name of Pattern	Display the name of pattern selected at present.
J	X Actual Size Display	Display the actual size of the existing pattern in X direction.

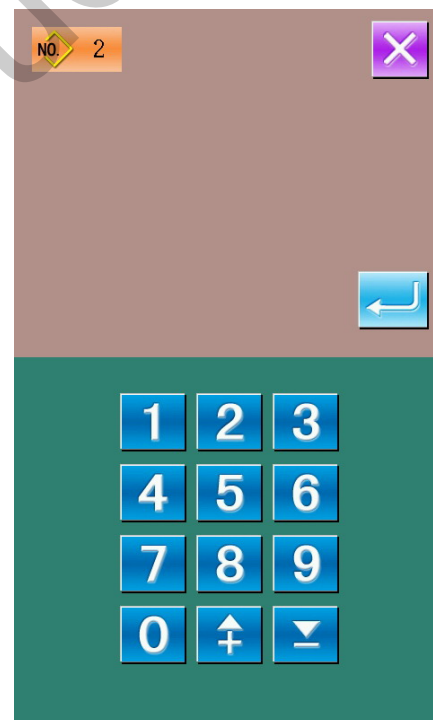
K	X Scaling Rate Setting	Display the scaling rate of the existing pattern in X direction
L	Y Actual Size Display	Display the actual size of the existing pattern in Y direction.
M	Y Scaling Rate Setting	Display the scaling rate of the existing pattern in Y direction
N	Counter Setting	Press it to select the type of counter and set the existing value  : Sewing Counter  : No. of pieces. Counter
O	Sewing Speed Display	Display the sewing speed at present
P	Sewing speed setting	Change the sewing speed
Q	P Pattern File Folder Number Display	Display the existing P pattern file folder number
R	P Pattern Selection	Display the registered P pattern; press that key to have access to P pattern sewing interface. This key is not displayed at initial status.

## 2.4 Pattern Registration


200 normal patterns can be registered at most. Press  to enter the interface of pattern registration(as shown in the right):

### ① Input the Pattern Number

User can input the pattern number with number keys. If the inputted pattern number exists, the shape and relating data of the registered pattern will be shown on the upper part of the interface. User can find the unregistered pattern number with





## ② Registration of New Pattern


After confirming the pattern number, user can press  to copy the data of the previously displayed pattern to the newly registered pattern. After this operation, the system will return to the interface for inputting data of newly registered pattern.


If you input the existed pattern number, the system will ask you whether to replace the existed pattern with the new one.

## 2.5 Name Pattern


Press  to have access to the interface for naming the pattern (as shown in the right). 14 figures can be inputted for naming a pattern at most.

 : Right-moving of icon

 : Left-moving of icon

 : Shift the letter between capital letters and small letters


 : Eraser

Select the wanted figure; press  to finish the operation for naming the pattern. Locate the figure by moving icon; the eraser is used to remove the figure on that position.



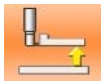


## 2.6 Threading

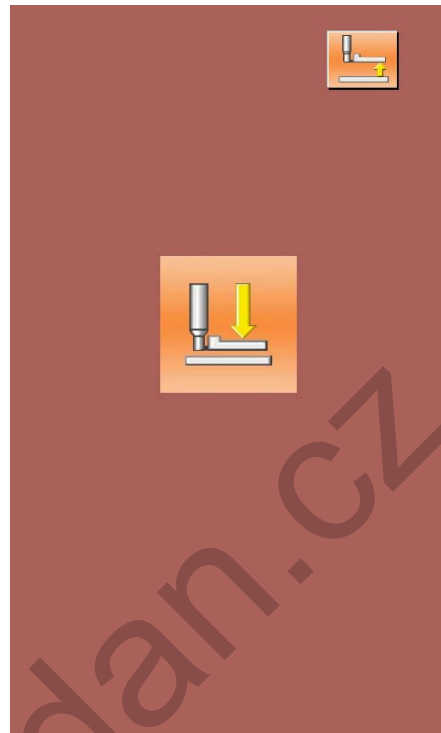
Press  to have access to threading interface, at this time the presser is lowered and press the Presser Lift Key to lift presser and let the system return to main interface.



: Presser Lower



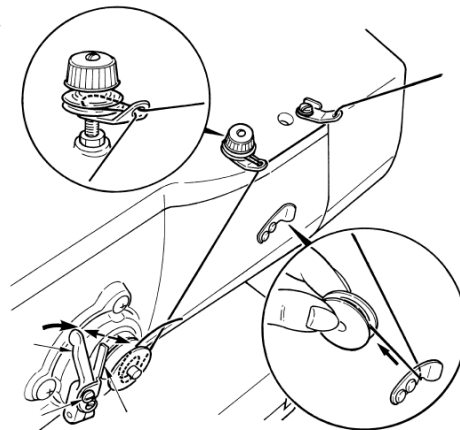
: Presser Lift




## 2.7 Winding

### ① Installation of Bobbin

Insert the bobbin into the winding axis, and then press the bobbin guide in the direction of arrows (as shown in right picture).




② **Display of Interface for Winding Bobbin Thread(Bottom Thread)**

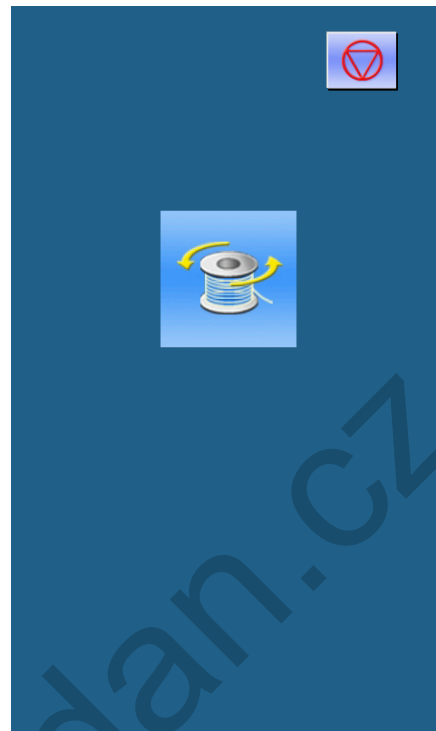
In the interface of data input, press  to activate the interface for winding thread (as shown in the right).

③ **Start Winding**

After user steps the start pedal, the sewing machine will start working, the device begins to wind the bobbin thread.

④ **Stop Sewing Machine**

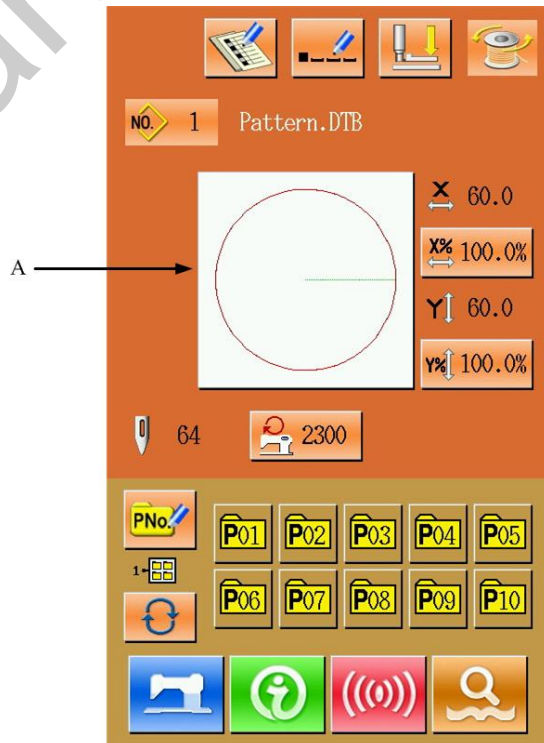
After user presses the , the sewing machine will stop running and return to normal mode. Additionally, user can press the Stop Key to stop the sewing machine under winding mode. At this time, user can go on winding bobbins with stepping on the pedal again. User can use this function at winding several bobbins in a same time.




**2.8 Pattern Selection**


① **Entry To Interface For Selecting Pattern**

In the interface of data input (as shown in right figure), user can click sewing shape A to have access to the interface for selecting pattern.



The upper side of the interface is the shape of pattern sewn; while the bottom is the registered pattern number.

 : Pattern Preview

 : Input Number for Pattern Inquiry


 : Pattern Deletion

## ② Pattern Selection


20 pattern numbers are in each page. When there is more than one page, the page key will be displayed. When selecting the registered pattern number, the upper side of interface will display the content of the selected

pattern, press  to finish the selection.


## ③ Pattern Inquiry

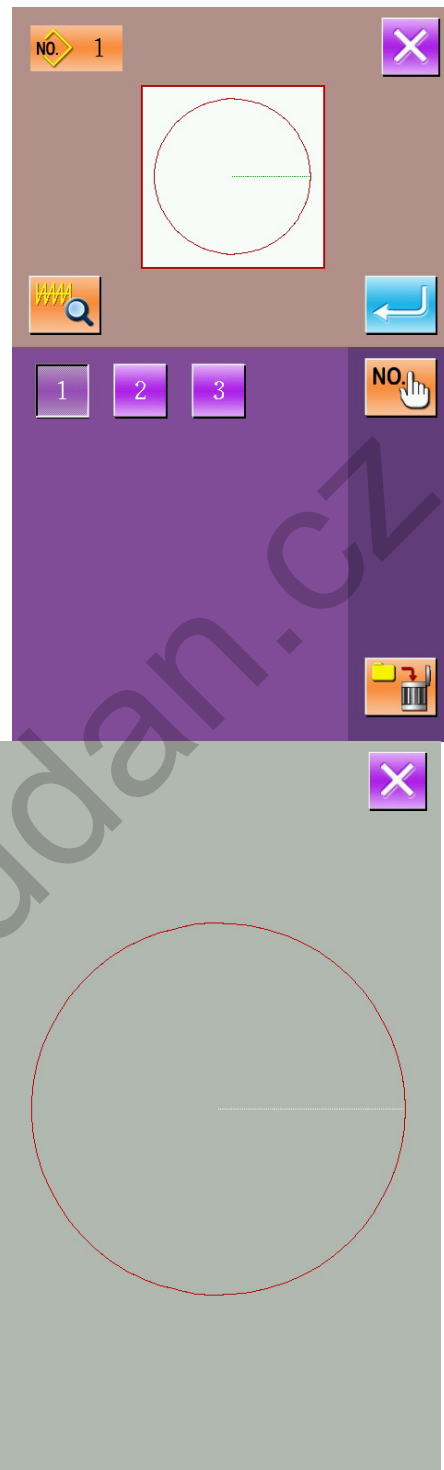
Press  to activate pattern inquiry interface; use number key to input the pattern number directly.

## ④ Pattern Deletion

Select the registered pattern, press  to delete it. But the pattern registered to P will not be deleted.

## ⑤ Pattern Preview

Press  to preview the present pattern in full screen. The full screen preview is the picture in with the grey background.



## 2.9 Sewing Data Setting

### ① Entry to Interface for Setting Sewing Data

In data input interface, press A, B or C to have access to scaling rate setting and speed limitation setting interfaces respectively.

	Item	Input Range	Default
A	Scaling rate in X direction	1.0~400.0 %	100.0%
B	Scaling rate in Y direction	1.0~400.0 %	100.0%
C	Max. speed limitation	200~2700r pm	2700rpm

Remark 1: Parameter U64 is used to shift the selection between scaling rate and actual size.

Remarks 2: The input range and default value of Max. speed limitation is affected by Parameter U01.

### ② Scaling Rate Setting

The right figure is the interface for setting scaling rate. The upper of it is for X direction, while lower part for Y direction.

A: Actual value in X direction

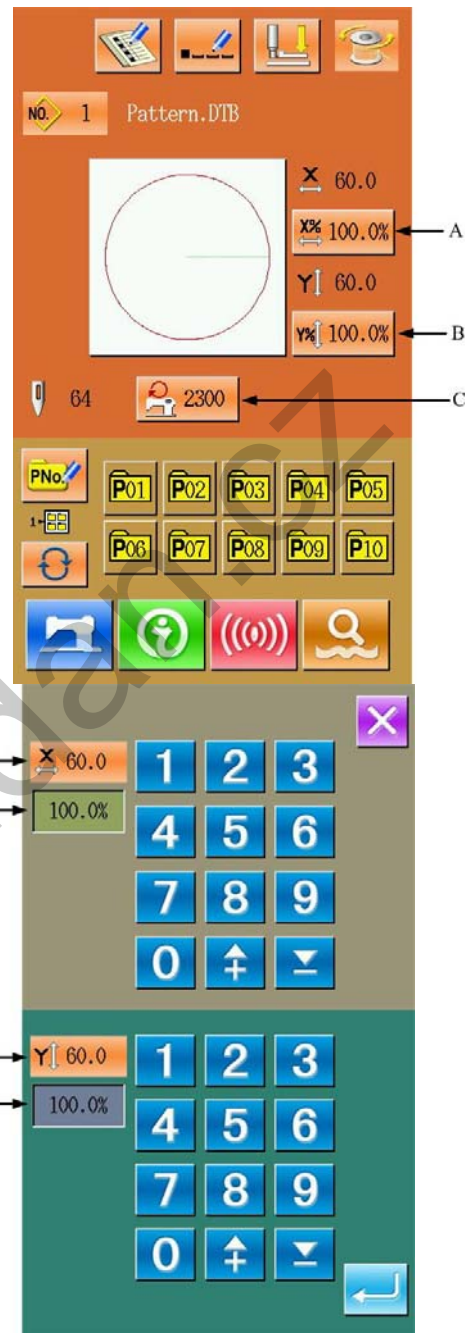
B: Scaling rate in X direction

C: Actual value in Y direction

D: Scaling rate in Y direction


With **0** ~ **9** and number keyboard or **↑** , **↓** to input values, the inputted figure will be located at the 1<sup>st</sup> place in the displayed value. The former inputted figures will be moved forward. Press **←** to end the operation and return to the data input interface.

Remarks: Press **↵** to save the set value.



### ③ Max. Speed Limitation


The operation is same to the above.

Press , the value of Max. speed limitation will be restored to the value set by the Parameter U01.







## 2.10 Registration of P Pattern


### ① Entry to Interface for Registration of P pattern

Press  to have access to the interface for P pattern registration, as shown in right.


### ② Input P Pattern Number

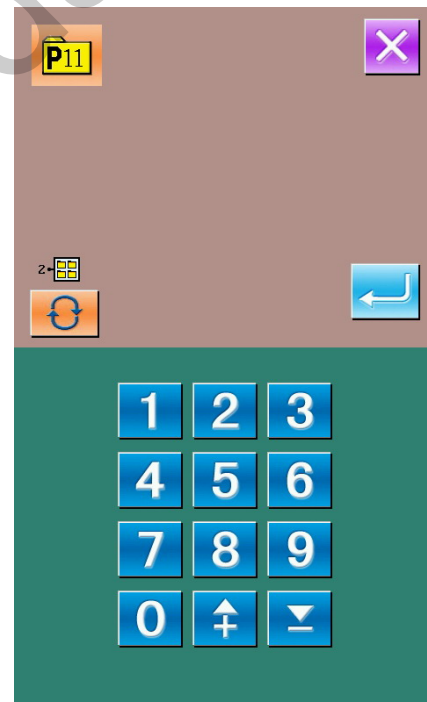
With  ~  and number keyboard or ,  to input the number wanted to be registered. The upper interface will display the registered sewing shape and relating data. In this circumstance, the new pattern can't be registered.

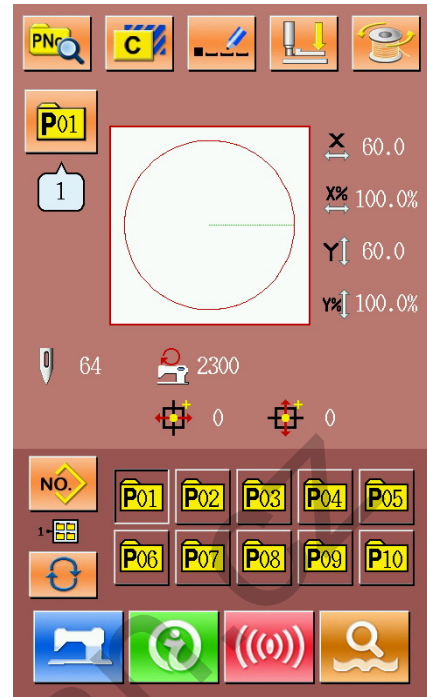
### ③ Selection of File Folder Number

P pattern number can be registered into 5 file folders, and 10 P patterns can be saved in each folder. Press  to select folder.

### ④ Determine the Pattern Number


Press  to end the operation for registration of the P pattern, and the system will return to the interface for data input.










## 2.11 Trial Sewing

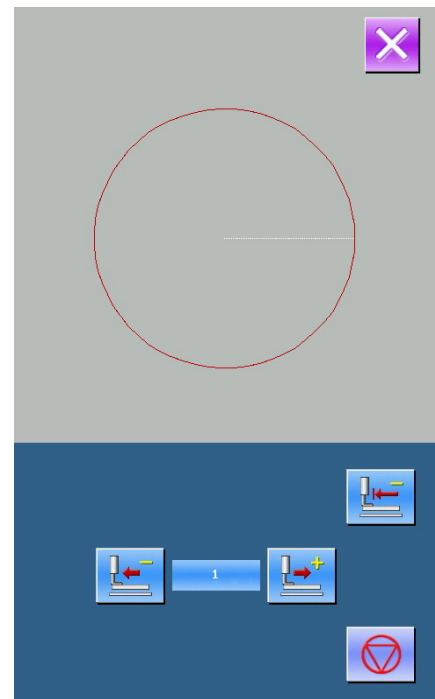
### ① Display of Sewing Interface

Press  at data input interface, then the background of LCD displayer will turn to blue. This is the interface for sewing.




### ② Display of Trial Sewing Interface


Press  at sewing interface to have access to the interface for trial sewing (as shown in right figure):

-  : Return to origin
-  : Presser backward
-  : Presser forward
-  : Stop




### ③ Start Trial Sewing

Step the pedal to lower the presser, then determine the shape with  & . The presser will keep moving after holding the key for a while. When you need stop it, press  please.

Press  to move the needle to the origin point and the system will be back to the sewing interface.


④ **End Trial Sewing**

Press  to quit the trial sewing interface and return to the sewing interface. When the pattern is not at the position for start or end, the pattern can be sewn in the middle way by stepping the pedal.

**2.12 Frame-moving Operation**


① **Entry to Frame-moving Interface**

When it is inconvenient to place sewing material due to the head needle, user can set the 2<sup>nd</sup> origin with the operation of frame-moving

Press  in the sewing interface to have access to frame-moving interface

Remarks: Due to the Parameter U89, this function can be forbidden



② **Frame-moving Operation**

After the presser is lowered, the user can press the direction key for moving the frame. Press  to end the operation.



## 2.13 Counter Operation

### ① Display of Counter Interface

In the sewing interface, press  (  ) to activate the interface for setting counter.




: Sewing counter



: No. of Pieces. Counter

### ② Counter Selection & Value Setting

Set the type of counter and the existing


value with  &  .

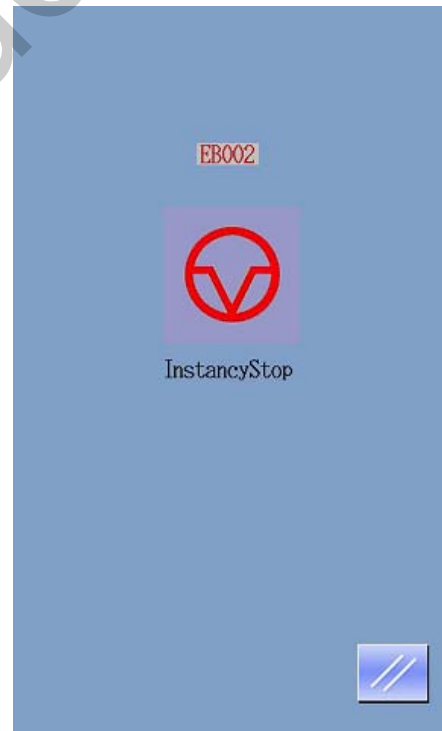


## 2.14 Emergency Stop

### ① Release the Error


During the sewing, press stop key, the sewing machine will stop working; The system will display the interface as in the


right picture. Press  to release the abnormal and have access to the emergency stop setting interface.






## ② Thread-trimming or Presser-lifting

Press  to trim the thread, then the system will have access to the interface for setting procedures.

Press  to lift the presser. After that, no operation is permitted; user shall turn off the power.

Remarks: The Parameter U56 can be set as “enter the setting interface at auto thread-trimming after pause”.

## ② Relocate the Presser to Sewing Position in Procedure Setting Interface.

Press  to have access to the interface for procedure setting.



: Intermediate Presser Action




: Feeding backward



: Feeding forward



: Return to origin

Press  or  to relocate the presser to the sewing position.

## ③ Re-start Sewing

Step the pedal to re-start the sewing.



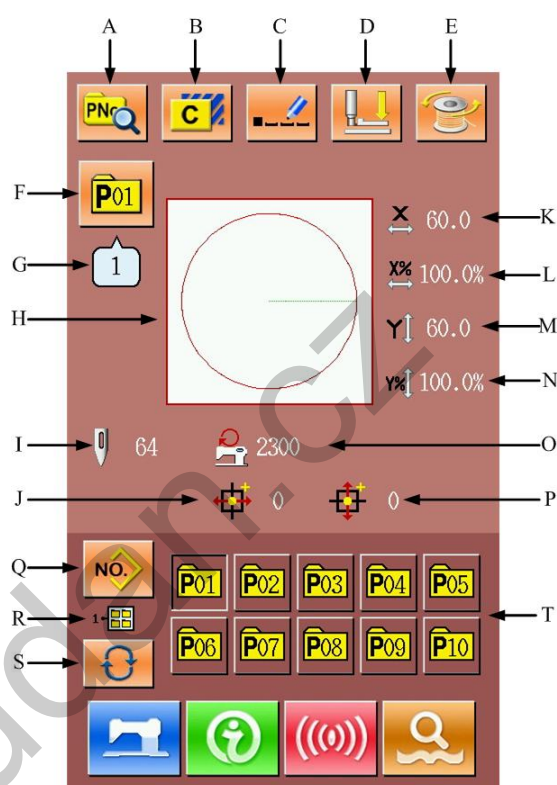
### 3 Prompt-pattern(P pattern)Operation

#### 3.1 P Pattern Data Input


Prompt-pattern, called as P pattern for short, is formed with a normal pattern and relating pattern sewing parameter (X scaling rate, Y scaling rate and speed limitation). When using the P pattern, users needn't to set the relating parameters at each time.

The interface of P pattern data input is shown as the right.

50 P patterns can be registered at most.




#### Description of Functions:

No.	Functions	Content
A	P pattern edition	Enable to edit the content of the P pattern
B	P pattern copy	Copy the present P pattern, and save it as new pattern number.
C	Pattern naming	14 figures are able to be inputted at most
D	Threading	Press it to lower the intermediate presser.
E	Winding	Wind the thread with a press on  .
F	P pattern number display	Display the number of the existing pattern.
G	Sewing shape number display	Display the number of the quoted normal pattern within the present P pattern.
H	Sewing shape selection	Display the shape of the present pattern.
I	Pattern stitch number display	Display the sewing stitch number of the pattern selected at present
J	X travel amount display	Display the travel amount of the present pattern in X direction

No.	Functions	Content
K	X Actual Size Display	Display the actual size of the existing pattern in X direction.
L	X Scaling Rate Setting	Display the scaling rate of the existing pattern in X direction
M	Y Actual Size Display	Display the actual size of the existing pattern in Y direction.
N	Y Scaling Rate Setting	Display the scaling rate of the existing pattern in Y direction
O	Max. Speed limitation	Display limited value on the Max. speed
P	Y travel amount display	Display the travel amount of the present pattern in Y direction
Q	Return to normal pattern data input	Return to the interface for normal pattern data input
R	P pattern file folder number display	Display the number of the present P pattern file folder
S	P pattern file folder selection	Shift the P pattern file folder number orderly
T	P pattern selection	Display the registered p pattern.

### 3.2 P Pattern Edition

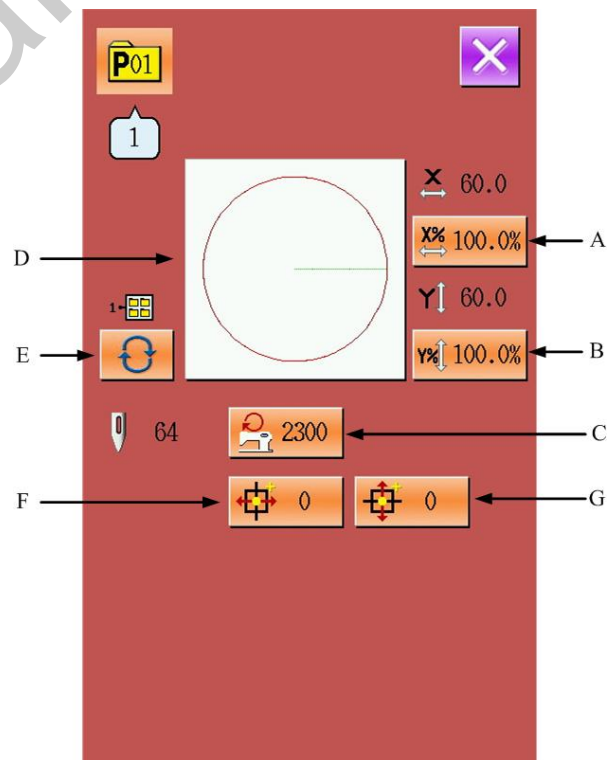
#### ① Entry to Interface of P Pattern Edition Interface

Press  to have access to the P pattern edition interface (as shown in the right).

#### ② Edition of Item Data

Select the item needing changing, and then set the value.

	Item	Input Range	Default
A	X Scaling Rate	1.0~400.0%	100.0%
B	Y Scaling rate	1.0~400.0%	100.0%
C	Max. Speed Limitation	200~2700rpm	2700rpm
D	Sewing Shape		
E	File Folder Number	1~5	
F	X Travel Amount	-5.0~5.0 mm	0
G	Y Travel Amount	-5.0~5.0 mm	0



### ③ Confirmation of Changed Data

Take the edition of “X Travel Amount” as example, with **0** ~ **9** and keyboard or **↑**、**↓** keys to input the value and press **↵** to finish the operation.



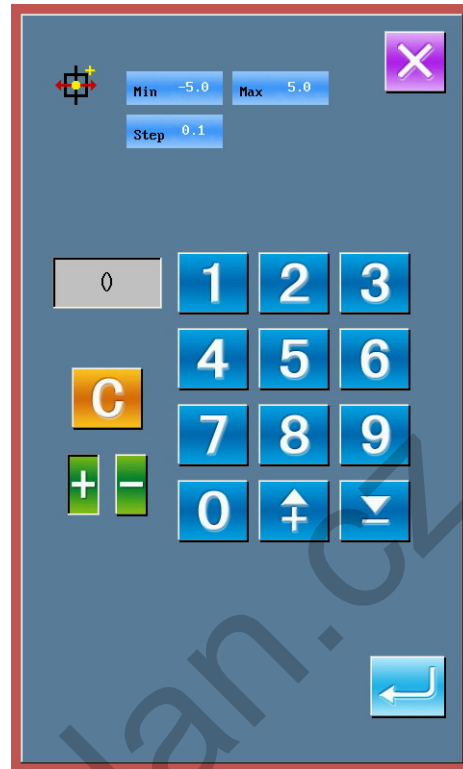
: The positive figure;



: The minus figure.

### ④ Quit the Edition Interface

Press **✕** to turn off the interface for editing P pattern, and then the system will return to the data input interface.

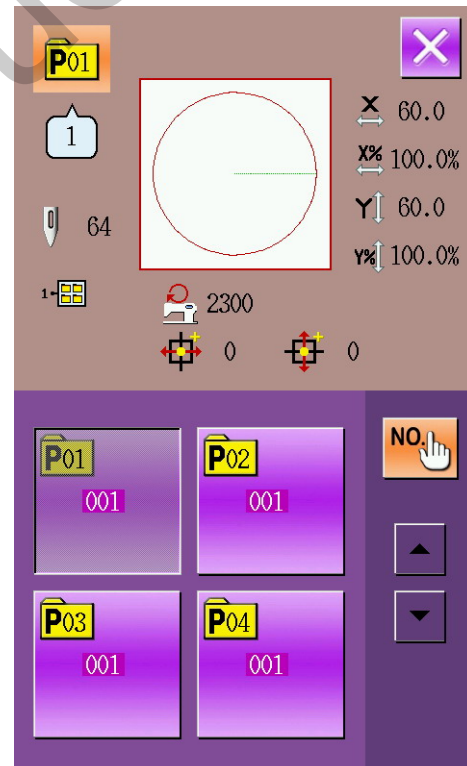


## 3.3 Copy of P Pattern

### ① Select the Pattern for Copy



Press **C** to have access to the interface for copying the P pattern (as shown in the right). Select the number of the copied pattern among the registered patterns and then

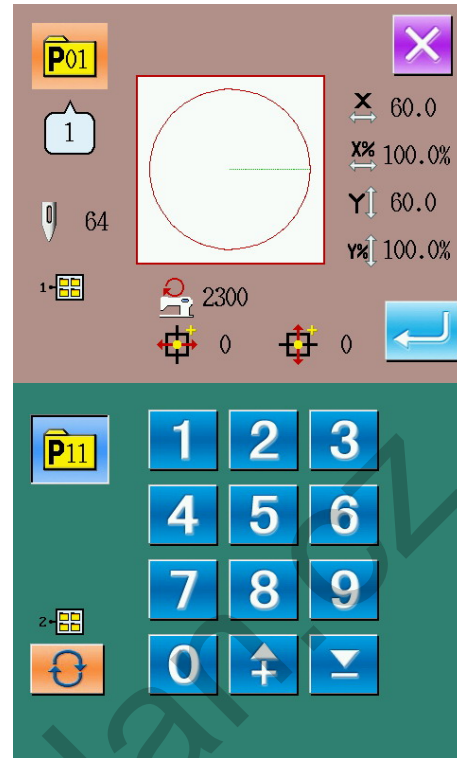
press **NO**.



## ② Input the Pattern Number for Initial Registration

In the upper part of the interface, the copied pattern will be displayed. The unregistered pattern number can be selected via the number keys; the registered pattern number can't be registered again.

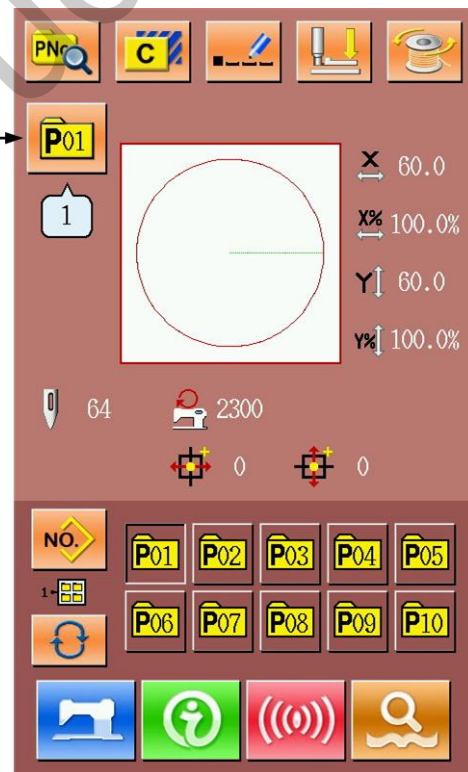
Press  to select the file folder for saving. Press  to end the operation and return to the interface for copying P pattern.




## 3.4 P Pattern Selection

### ① Entry to P Pattern Selection Interface


As shown in the picture at right, user can press figure A to have access to the interface for selecting the P pattern.

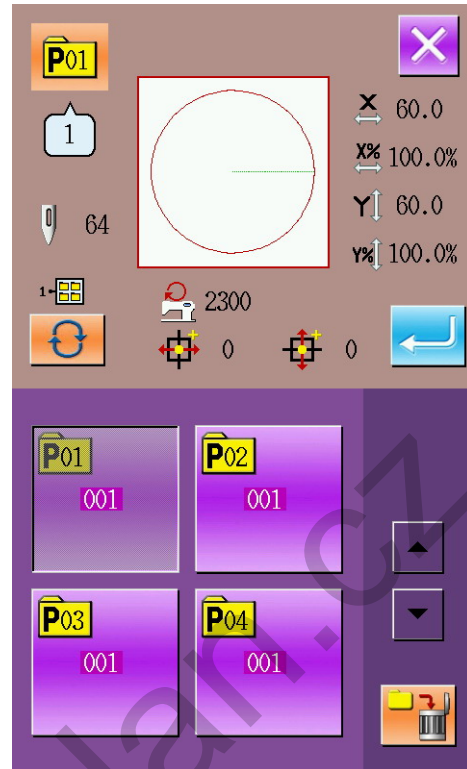


**② Pattern Number Selection**

The upper side of the interface is the information of the pattern selected at present, press  to conceal the file folder number. At this time the registered P pattern will be displayed.


**③ Confirm the Selection of Pattern**

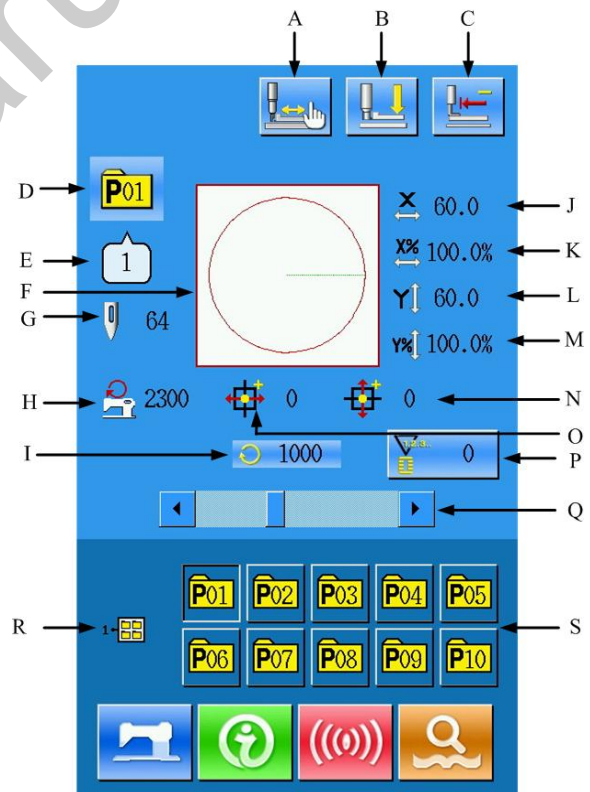
The operation is same to that in selection of normal pattern, press  to end the selection.





**3.5 Sewing P Pattern**

**Description of Functions:**

In the interface of P pattern data input, user can press  to have access to the interface for sewing P pattern (as shown in the right).



No.	Functions	Content
A	Trial sewing	Press it to have access to the trial sewing interface so as to determine the shape of pattern.

No.	Functions	Content
B	Threading	Press it to lower the intermediate presser.
C	Return to origin	Press it to move the presser to the origin point.
D	P pattern number display	Display the number of the pattern selected at present.
E	Sewing shape number display	Display the number of the normal pattern quoted within the P pattern at present
F	Pattern shape display	Display the pattern shape selected at present
G	Patten stitch number display	Display the sewing stitch number of the pattern selected at present.
H	Max. speed limitation display	Display the limitation on Max Speed
I	Sewing speed display	Display the sewing speed at present
J	X actual size display	Display the actual size of the existing pattern in X direction.
K	X scaling rate setting	Display the scaling rate of the existing pattern in X direction
L	Y actual size display	Display the actual size of the existing pattern in Y direction.
M	Y scaling rate setting	Display the scaling rate of the existing pattern in Y direction
N	Y travel amount display	Display the travel amount of the present pattern in Y direction
O	X travel amount display	Display the travel amount of the present pattern in X direction
P	Counter setting	Press it to select the type of counter and set the existing value  : Sewing Counter  : No. of pieces. Counter
Q	Sewing speed setting	Change the sewing speed
R	P pattern file folder number display	Display the file folder number of the P pattern at present
S	P pattern selection	Display the registered P pattern

## 4 Combination(C) Pattern Operation

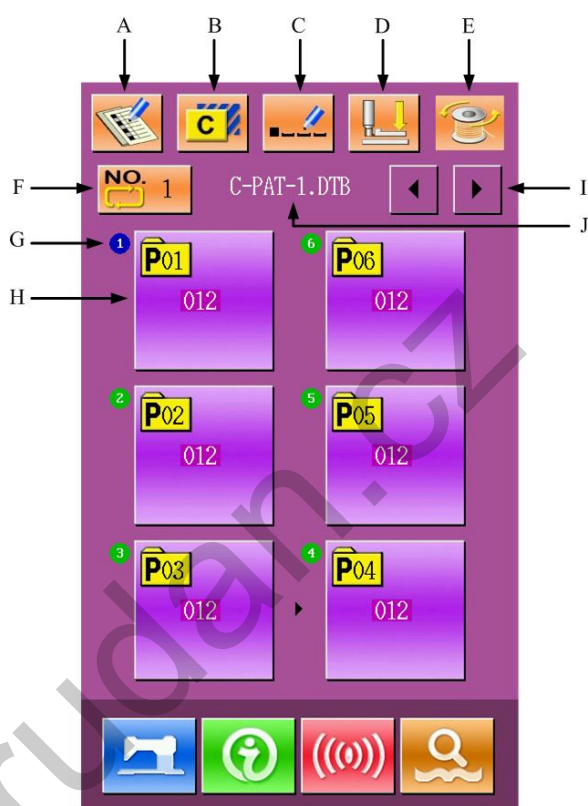
### 4.1 C Pattern Data Input

The combination pattern, called as C pattern for short, is formed with a group of P patterns, which can contain 30 P patterns at most. 20 C patterns can be registered in the system at most.


Please refer to the content in [8.8 Shift of Sewing

Type]to have access to the interface for Inputting

Combination pattern data (as shown in right).



#### Description of Function:

No.	Function	Content
A	C pattern registration	Register a new combination pattern
B	C pattern copy	Copy the content of the present C pattern, and save it as a new pattern (with a new code).
C	Pattern naming	14 figures can be inputted at most.
D	Threading	Lower the intermediate presser after pressing.
E	Winding	Press the Ready  again to carry out the winding operation.
F	C pattern number selection	The pattern number will be displayed on the button, press it to have access to the interface for selecting C pattern
G	Sewing order display	Display the sewing order of the present pattern, the blue background is the initial sewing design.
H	C Pattern selection	Press it to have access to the interface for editing the C patter, user can select a P pattern for inputting
I	Page key	30 C patterns are able to be registered at most and 6 for each page at most.



No.	Function	Content
J	C pattern name display	Display the name of C pattern.

## 4.2 C Pattern Edition

### ① Entry to Interface for Editing C Pattern

In the interface of C pattern data input, user can press A to have access to the interface of C pattern edition.

In the initial status, the first design is a blank, because there is no P pattern registered into to it as sewing design at that time.



### ② Selection of Design

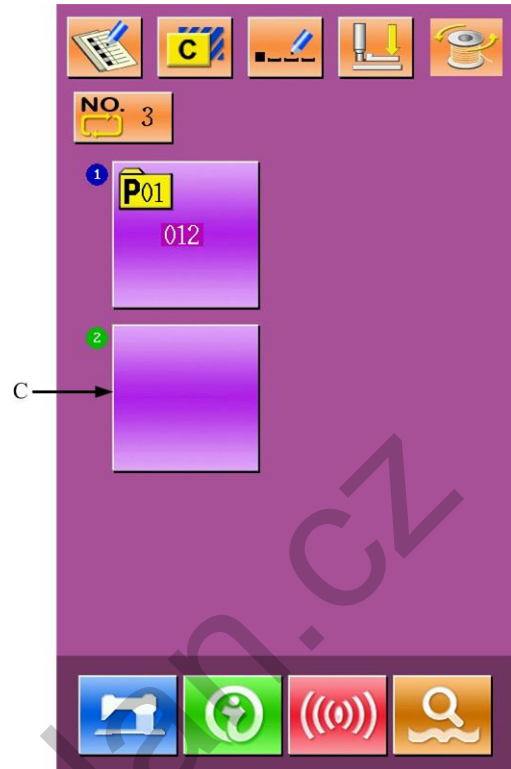
The right picture is the interface for C pattern edition, select the P pattern (B) which is wanted registering, and then press



to end the selection.

### ③ Repetitive Registration

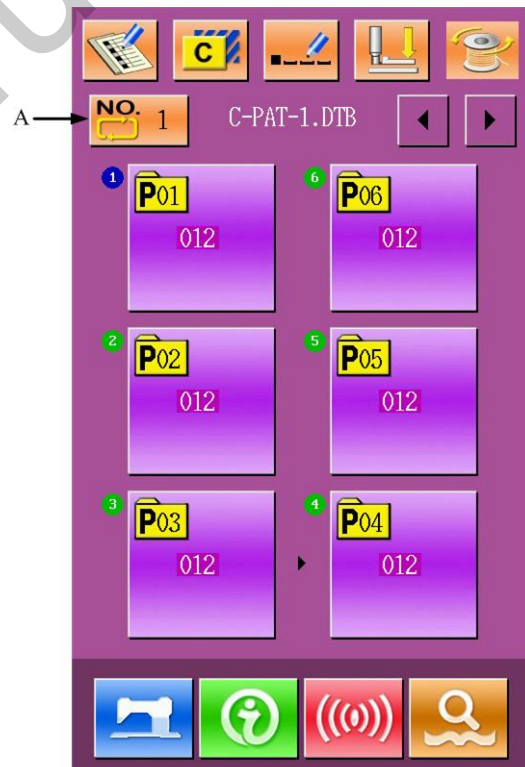
When the first design is determined, the button (C) for selecting the 2<sup>nd</sup> design is displayed, repeat the above operation to register other designs repeatedly.



### 4.3 C Pattern Selection


#### ① Entry to Interface of C Pattern Selection

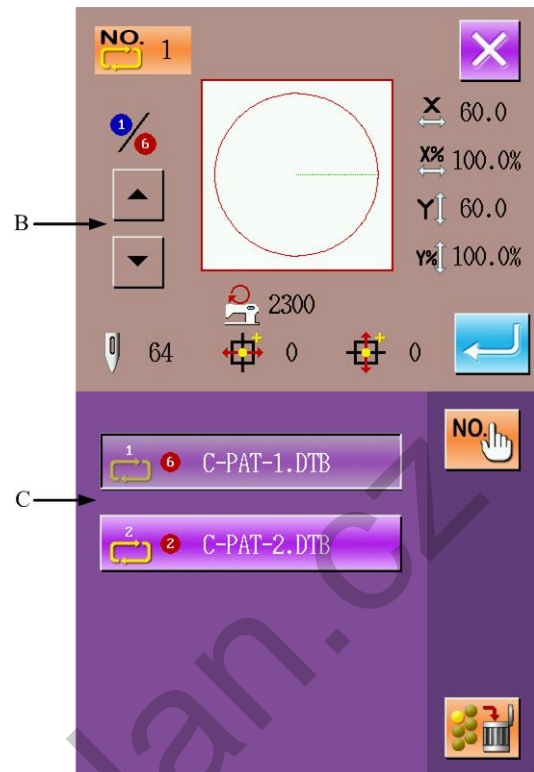
As shown in the right figure, user can press figure A to have access to the interface for C pattern selection.




## ② Select the C Pattern Number

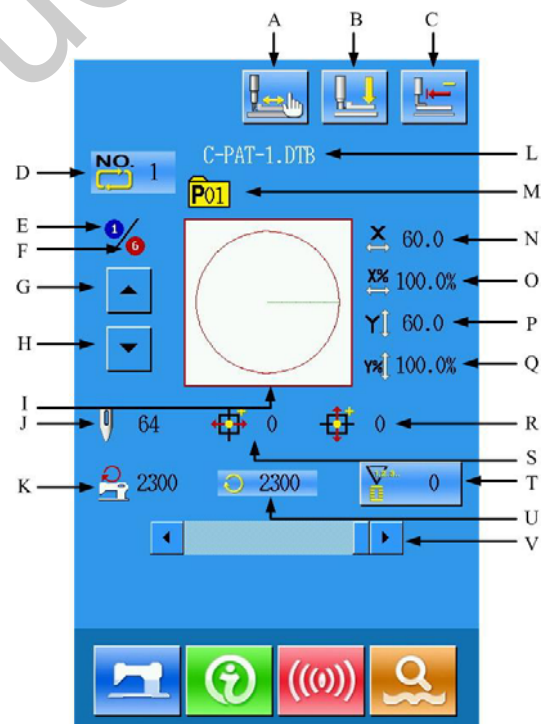
The right figure is the interface for C pattern selection. By pressing B, user can change the information of P pattern within this C pattern orderly.

To confirm the selected C pattern number, please press  to end the operation.





## 4.4 C Pattern Sewing

In the interface of C pattern data input, user can press  to have access to the interface for sewing (as shown in the right figure).




### Description of Functions:


No.	Function	Content
A	Trial Sewing	Press it to have access to the trial sewing interface so as to determine the shape of pattern.
B	Threading	Press it to lower the intermediate presser.

No.	Function	Content
C	Return to Origin	Press it to make presser return to origin.
D	C Pattern Number Display	Display the number of the existing pattern
E	Sewing order display	Display the sewing order of the pattern sewn at present
F	Number of registration display	Display the design number within the pattern sewn at present.
G	Sewing order backward	Return to the previous design
H	Sewing order forward	Move to the next design
I	Pattern shape display	Display the registered shape of the pattern sewn at present
J	Pattern stitch number display	Display the stitch number of the shape sewn at present
K	Max. speed limitation display	Display the limited value of the Max speed for the pattern sewn at present
L	C pattern name	Display the name of the present pattern
M	Sewing shape number display	Display the number of the sewn shape registered under the C pattern.
N	X actual size display	Display the actual size of the present sewn shape in X direction.
O	X scaling rate setting	Display the scaling rate of the present sewn shape in X direction
P	Y actual size display	Display the actual size of the present sewn shape in Y direction.
Q	Y scaling rate setting	Display the scaling rate of the present sewn shape in Y direction
R	Y travel amount display	Display the travel amount of the present sewn shape in Y direction
S	X travel amount display	Display the travel amount of the present sewn shape in X direction
T	Counter setting	Press it to select the type of counter and set the existing value  : Sewing Counter  : No. of pieces. Counter
U	Sewing speed display	Display the sewing speed at present
V	Sewing speed setting	Change the sewing speed

## 5 Pattern Edition




### 5.1 Entry to Pattern Edition Mode

Press  to shift the interface of data input and mode selection (as shown in the right). In this interface, user can do some detailed settings and editing operations. For the detailed operations and setting under Mode Selection interface please refer to [9 Mode and Parameter Setting].

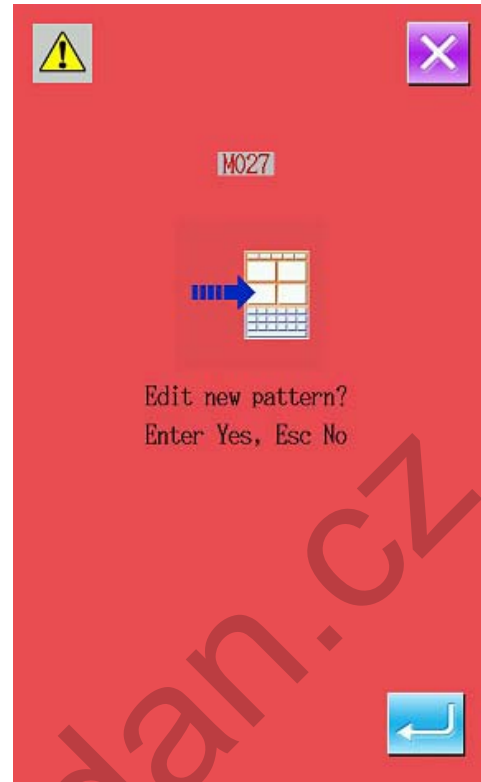
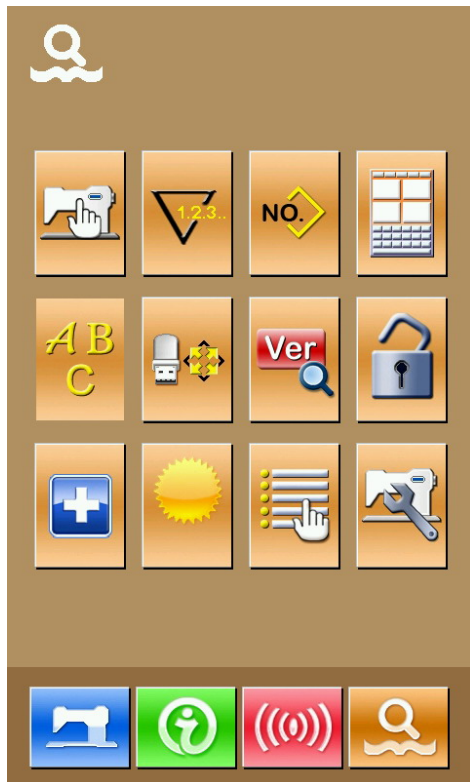
Press  to have access to the interface for selecting edition mode and sewing mode (as shown in the right picture).


 : sewing mode

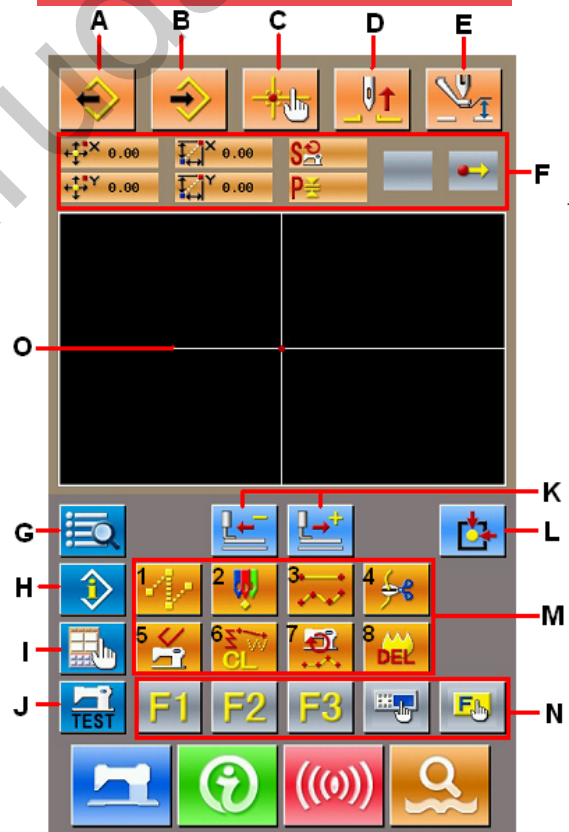
 : edition mode

Select  and press  to return to the interface for mode selection. Press  again, and then the system will quit the mode selection interface. Then the system will ask whether to go to the interface of pattern edition.















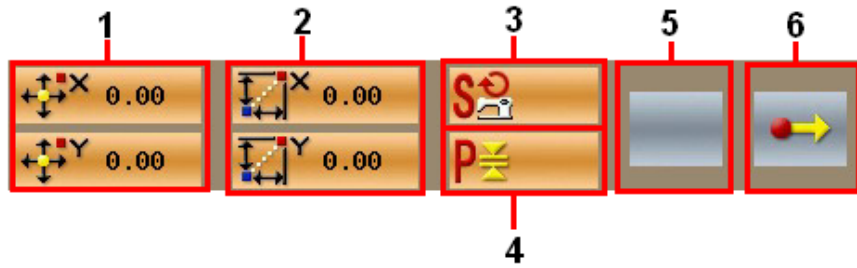
After pressing , the user will have access to the standard interface for pattern edition, as shown in right.











### Description of Functions:

No.	Function	Content
A	Load design	Display the interface for loading design
B	Design input	Display the interface for design input

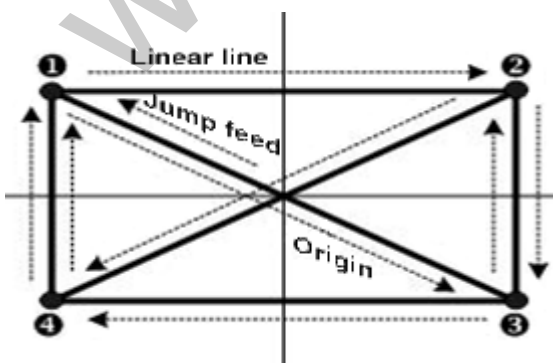
No.	Function	Content
C	Needle entry point inquiry	Quick locate the needle entry point; during the pattern edition, user can input the coordinates directly.
D	Needle-lifting	Make the needle return to the highest point
E	Intermediate presser adjustment	Lift or lower the intermediate presser
F	Information of existing needle position	Display the information of the existing needle position
G	Code list	Display the entire available editing functions, please refer to 【Editing function list】 for detail.
H	Information	Display the information of the pattern edited at present.
I	Display setting	Set wide-angle or display of needle entry point
J	Trial sewing	Trial sewing on the pattern edited at preset
K	Forward · backward feeding	Move a stitch from the existing needle position(forward  ; backward  )
L	Return to origin	Make the needle return to the origin from its existing position
M	Function keys	Enable to call the functions on the buttons
		1.  : jump feed
		2.  : point sewing
		3.  : normal sewing
		4.  : thread-trimming
		5.  : Release the mechanical control order
		6.  : Element deletion
		7.  : Change of sewing speed section
8.  : delete the pattern design edited at present		
N	Functional hot-key	User can use Functional Selection· Setting (Functional code 112) to assign the functions needed to each button, thus use these buttons as hot keys. After the assignment, the figure standing up for that function will be displayed on that key.
O	Pattern display area	Display the pattern



No.	Item	Content
1	Absolute coordinate	Absolution coordinate of the existing needle position from its point to origin
2	Relative coordinate	The relative coordinate of the existing needle position.
3	Speed	The sewing speed or the jump feeding speed at existing needle position
4	Pitch	Represent the sewing stitch length of the present element. (when the figure is scaled, the original figure will be displayed)
5	Type of element	The type of the present element. For sewing data, the figures representing elements types (such as jump feed  , broken line  , curve  ) and so on) will be displayed; for mechanical control orders, the figures standing for the control order type will be displayed (like thread-trimming).
6	Type of needle entry	Represent the types of needle entry position.
		 Start point of design: the start position of design (origin).
		 Middle point of element: the middle point within the element (neither the top point nor the end point of element).
		 Top point, the top point of a broken line.
		 End of element: the end position of the element.
		 End of design: the end position of design.

## 5.2 Pattern Edition

With the pattern edition function, user can input the following pattern



Input point:

	X (mm)	Y (mm)
①	-40.00	25.00
②	40.00	25.00
③	40.00	-25.00
④	-40.00	-25.00

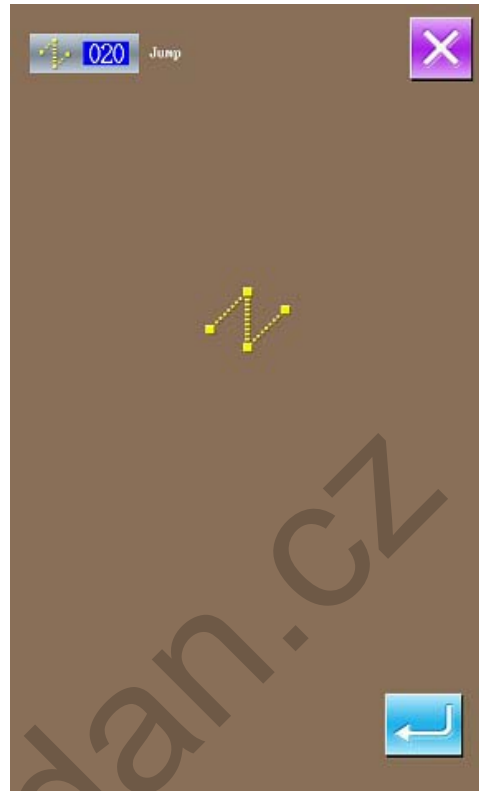
Input order: It is shown as the dotted arrow in the left.





### ① Input of Jump Feed



In the standard interface of pattern edition,

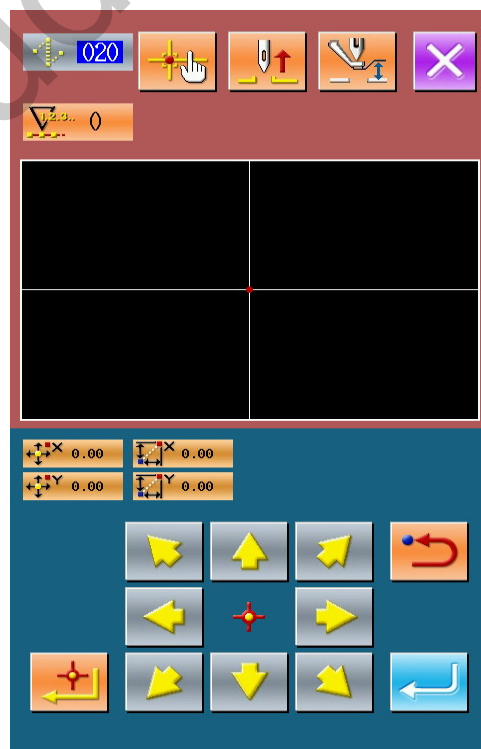
press  to activate the interface for setting jump feed:

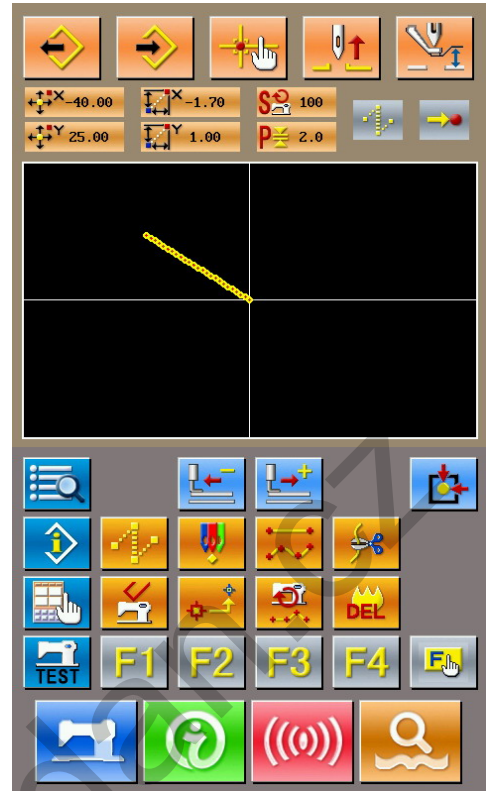
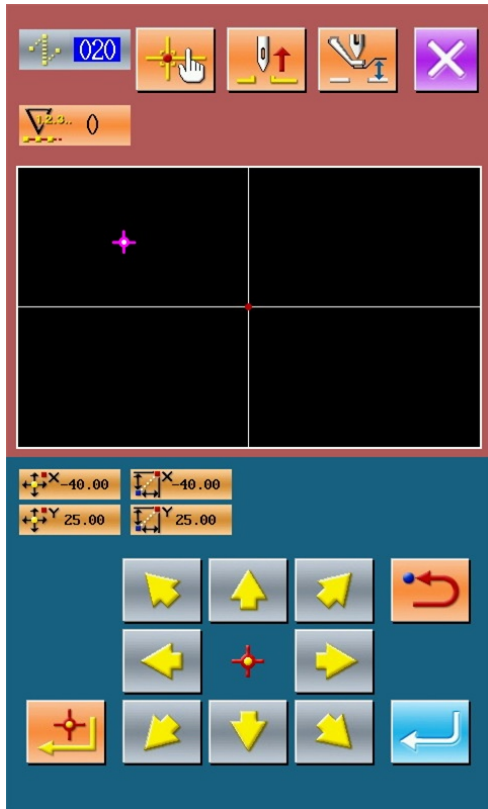


Press  to activate the interface for locating jump feed position:


In this interface, please use  to move icon (needle position) to position (-40, 25).

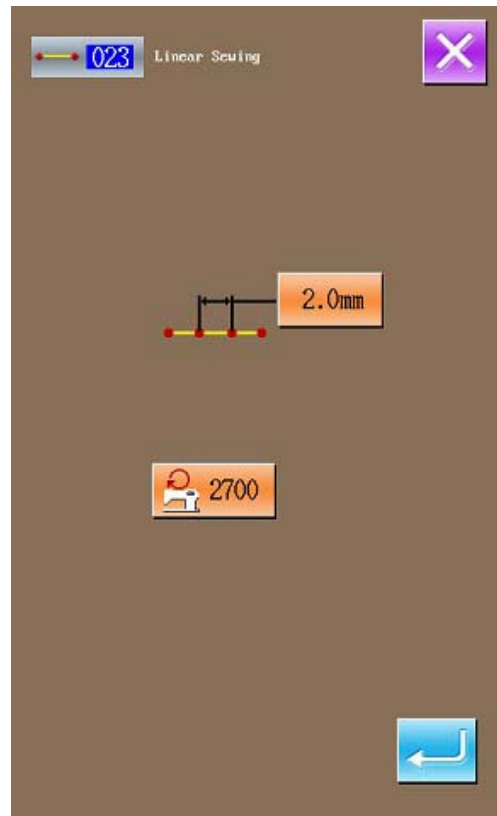
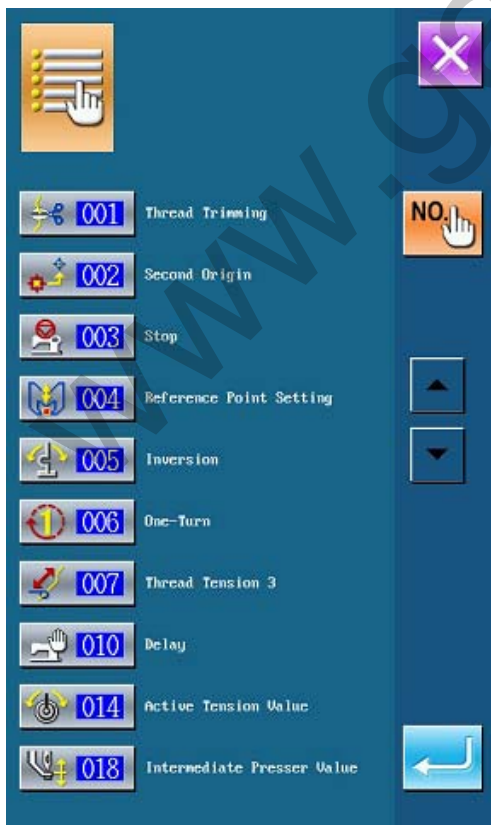
Press  for confirmation and then press  to save the setting and quit to the standard interface for editing pattern. After the quit, the stitch form of jump feed will be displayed;





② Input of Linear Normal Sewing

In the Functional Code List, select “023 Linear Normal Sewing” and then press  to have access to the interface for setting linear normal sewing:

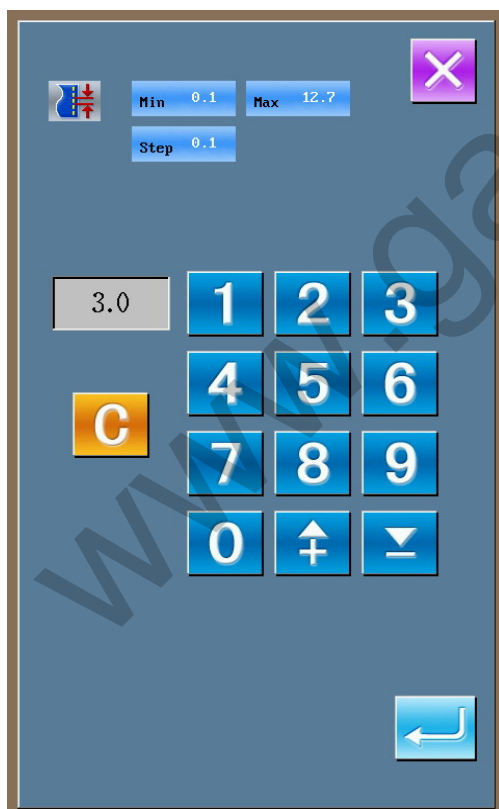



In the interface for setting linear normal sewing,



press **2.0mm** to have access to the interface for setting length of sewing stitch (as shown in the right picture)

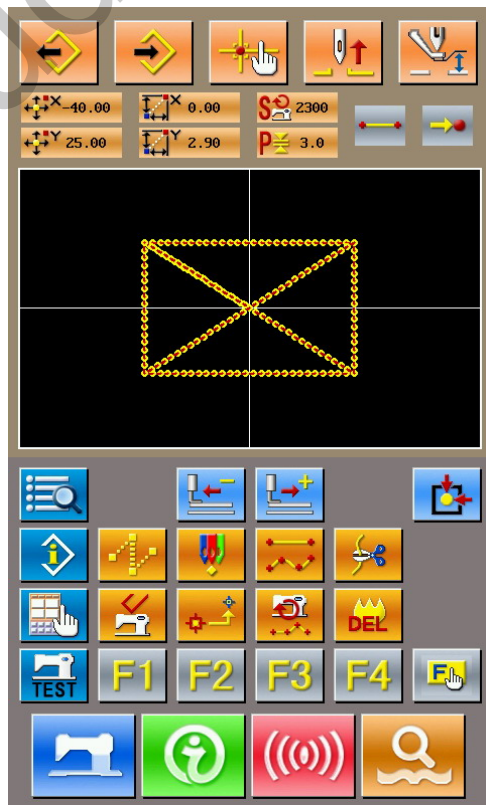
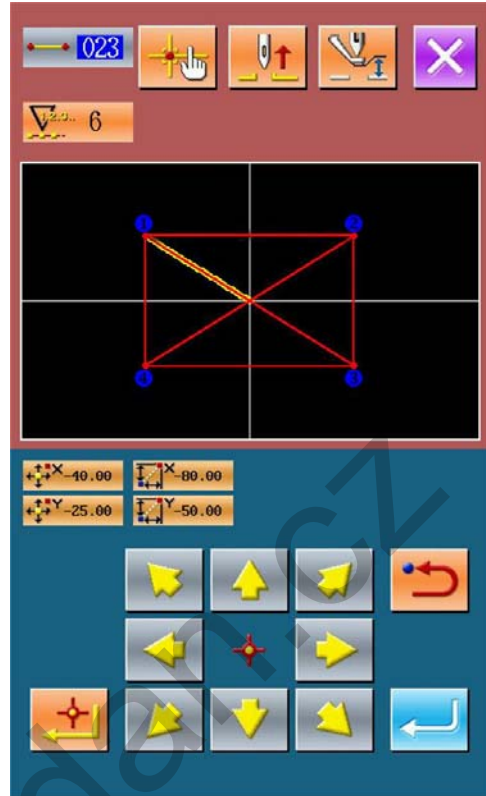
Press **3** & **0** orderly to change the sewi stitch length to "3.0". press ENTER to save it and return to the interface for setting linear normal sew


Remarks: Press **C** to clear the value.




After the confirmation on the sewing stitch length at “3.0mm”, the user can press  to have access to the interface for setting position of linear normal sewing.





In that interface, press  to move icon (Needle Position) from ① to ② and then press . Repeat the above operations to move icon in the order of ②→③→④→①→③→②→④→① (as shown in the right figure).





After the confirmation to the pattern, user can press  to generate the pattern data, and system will return to the Standard interface of pattern edition and display the pattern.

### ③ Save Pattern


Press  to have access to the interface for saving pattern, save the edited pattern (as shown in the right picture).

The system will generate a number automatically, but user can also input desired number with the  ~  & number keyboard or  & .

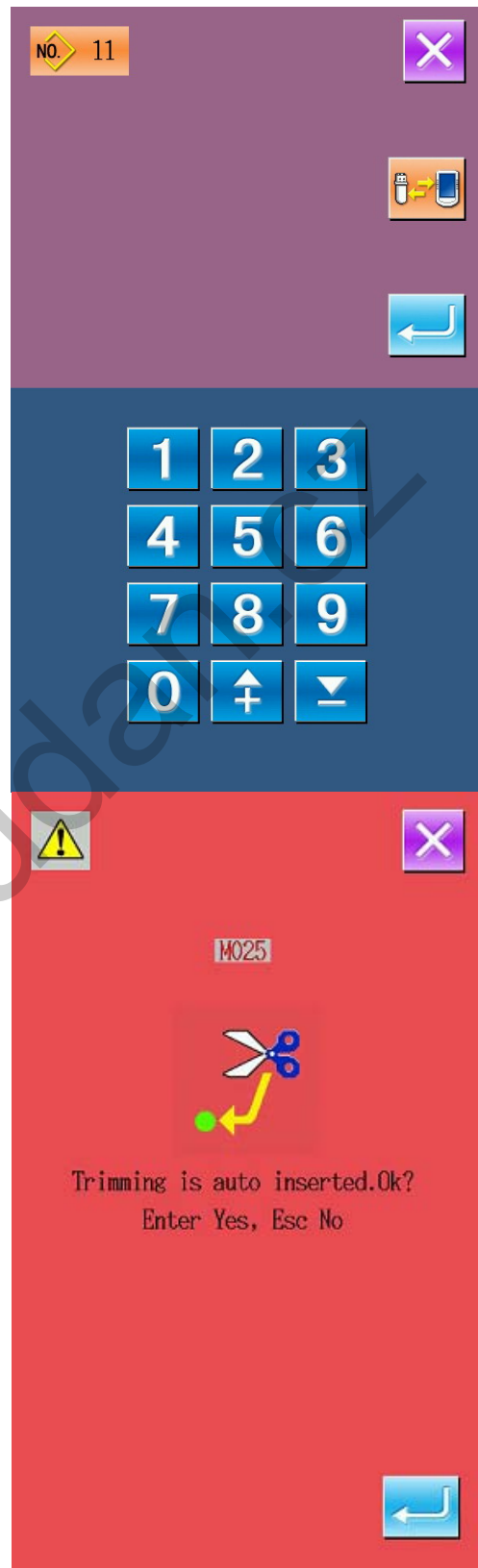
With , user can select the position to save that pattern. User can save it into storage media of operational panel or into U disk..

Press  to save the pattern. At this time the system will ask you whether to insert trimming automatically. (as shown in the right picture).


Press  to agree;


Press  to cancel the inserting of auto-trimming

After the operation, the system will return to the standard interface for pattern edition.





### 5.3 Quit Pattern Edition Mode


In the standard interface of pattern edition, press  to have access to the interface for selecting mode (as shown in the right).


Press  to have access to the interface for selecting edition mode or sewing mode (as shown in the right).

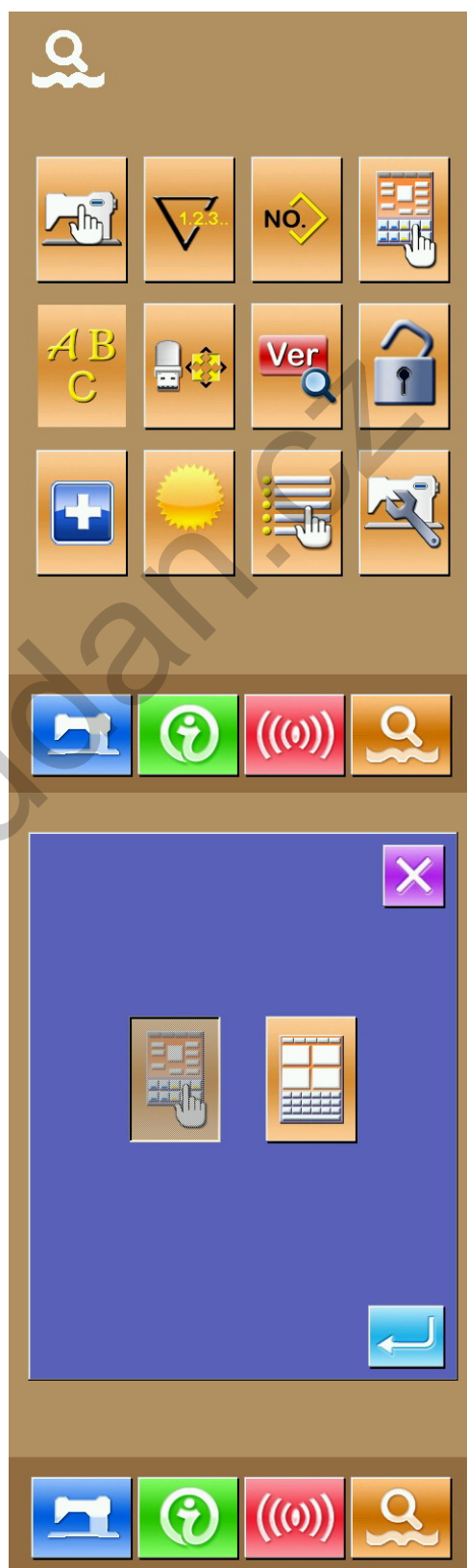
 : Sewing mode

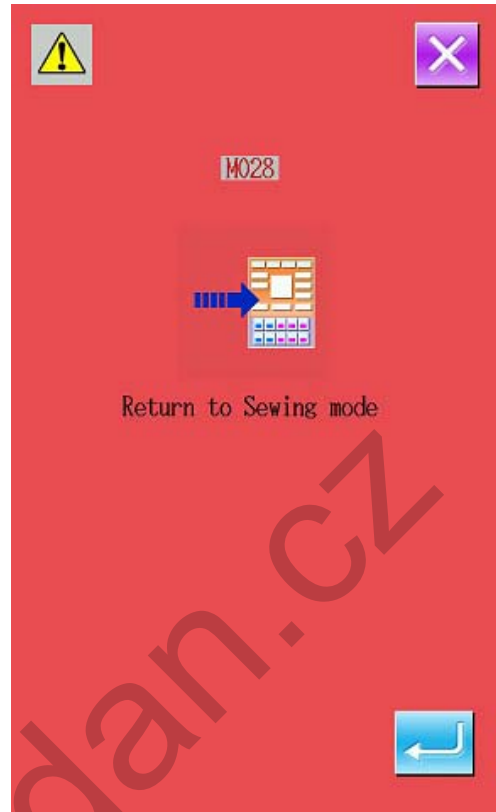
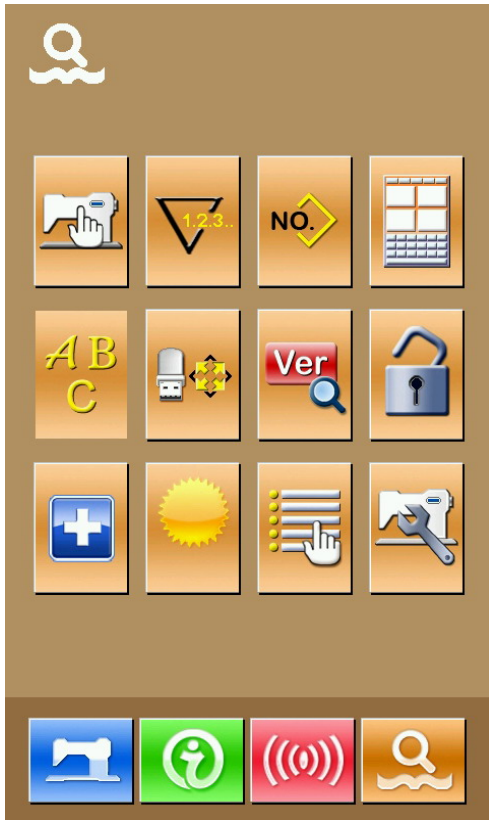
 : Edition mode

Select  and then press  to return to

the interface for mode selection. Press  again to quit the interface for mode selection. At this time the system will ask user whether to return to the sewing mode.

Press  to return to the sewing mode from the pattern edition mode.





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## 6 Information Functions

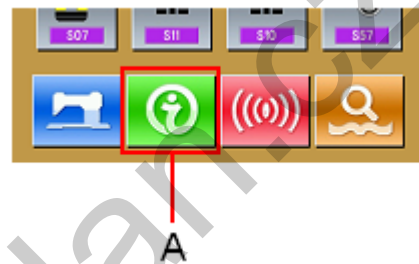
Information Functions contain the following three functions:

- 1)The oil replacement (Grease-up) time, needle replacement time, cleaning time and etc can be specified, and the warning notice can be given after the lapse of the specified time.
- 2)The working speed can be checked at a glance and the target achieving consciousness as a line or group is increased as well by the function to display the target output and the actual output.
- 3)Display the threading figure.

### 6.1 information for Maintenance & Repair


#### ① Display of Information Interface

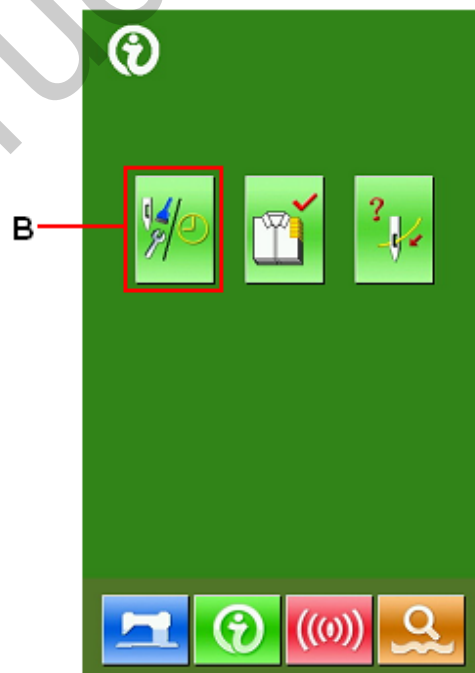
In the interface for data input, press the Information Key (A) to activate the interface of information.



#### ② Display of Interface for Maintenance & Repair

Please press the Maintenance & Repair

Information Key  (B)





In the interface for maintenance and repair, the following three items are displayed.



: Needle replacement (thousand stitch)



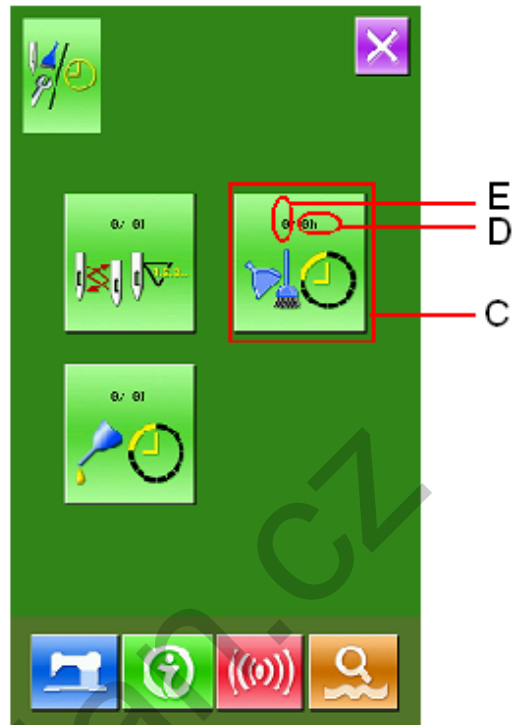
: Cleaning time(hour)



: Oil replacement time (hour)

The displays of each item are at button C. The interval or repair (maintenance) is at D; the left time for replacement is at E.

Additionally, user can clear the left time for replacement.

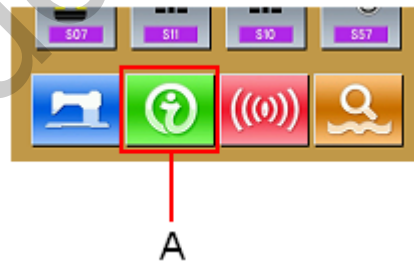


## 6.2 Maintenance & Repair Time Input

### ① Display of Information Interface (Level of Maintenance)

In the interface of data input, hold the information key (A) for 3 seconds to activate the interface of information (Maintenance level).

In that interface, there are five keys.



### ② Display of Interface for Maintenance & Repair

Please press the Maintenance & Repair

Information Key  (B).

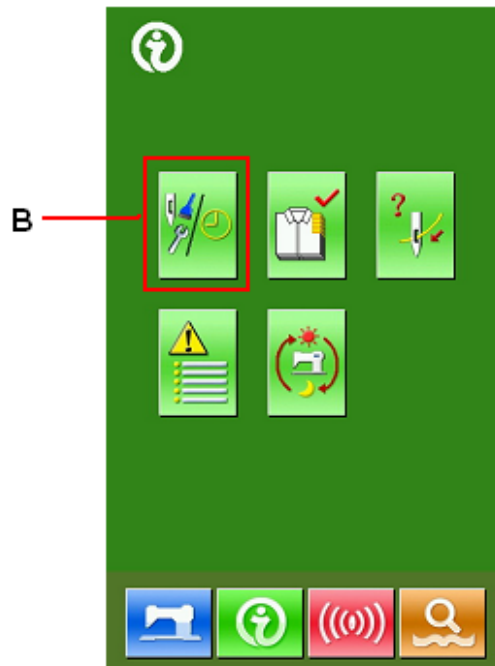
※ The descriptions about the two buttons on the down part of this interface:



: Alarm record



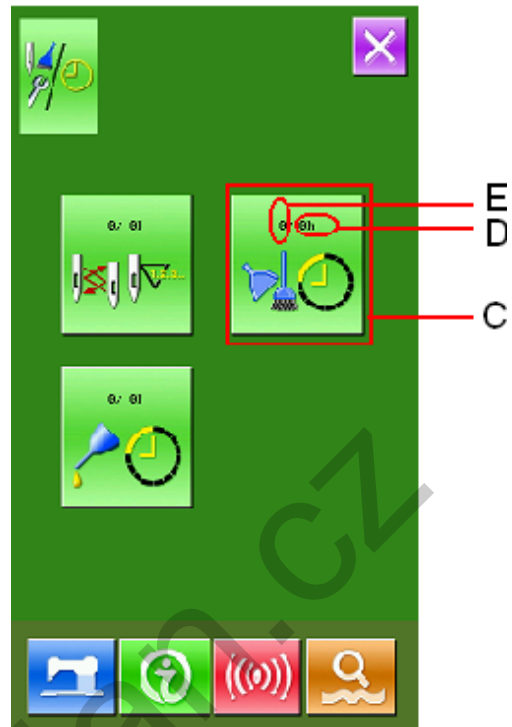
: Running record



In the interface of maintenance and repair information, the system displays the content same to that on the ordinary maintenance and repair interface. Press the Item Button C (or changing the repair and maintenance time) to activate the relating input interface.




For an example, if user presses the cleaning time can be set.



### ③ Set Item of Maintenance & Repair


If the value of this item is set at 0, the function for maintenance and repair is stopped.

Use the number keyboard to input the set value of this item, press  to confirm the input.



## 6.3 Alarm Release

When it comes to the pointed time for maintenance or repair, the system will activate the

prompt interface. If user wants to clear the time, please press . Before the clearance of the time, the information prompt interface will be displayed after each sewing task. The following are the information prompt code for each item:

- Needle Replacement: M012
- Clean Time: M013
- Oil Replacement Time: M014

## 6.4 Production Control

In the interface of production control, the system will be able to display the amount of products from the beginning to now and the target producing amount, as long as the user fixes the time for start.

The two methods for displaying the interface of production control are shown at below:

### 9.4.1 From Information Interface

#### ① Display of Information Interface

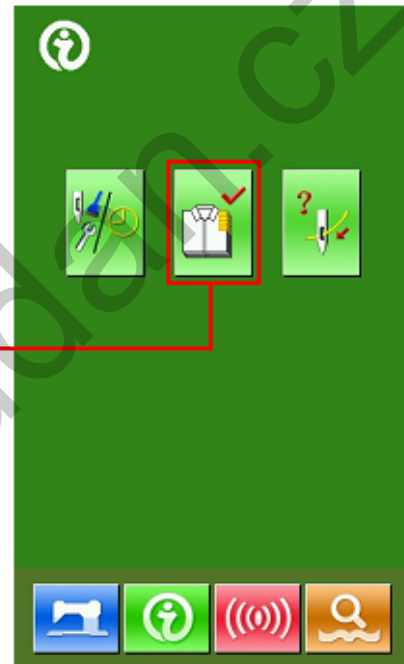
In the interface of data input, please press the information key (A) to activate the interface of information



A

#### ③ Display of Production Control Interface

Press the key (B) in the interface of information to activate the production control interface (as shown in the right figure).



B

There are 5 items displayed on the interface of production control.

#### A : Target A mount at Present

According to the pitch time to display the target amount of sewing up to now automatically.

#### B : Actual Amount

Automatically display the amount of pieces sewn.

#### C : Final Target Amount

Set the final Target Amount of production.

#### D : Pitch Time

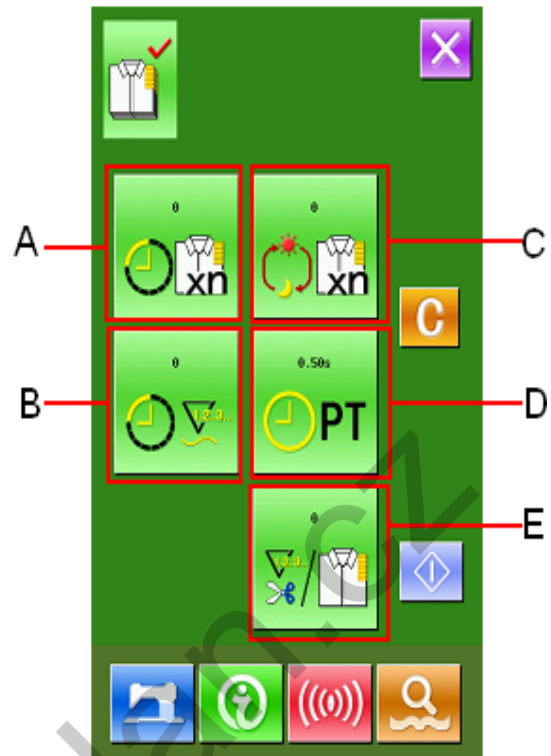
Set the pitch time (Second) among each

working progress

### E : Time for Trimming

Set the time for trimming in one progress. It is related to the calculation of the actual amount.

If the time for trimming is set at 1 , actual amount will be calculated at every progress if this parameter is set at 2, the actual amount will be calculated at every two progresses. The rest is done in the same manner. If the number of thread-trimming is set at 0, No calculation will be carry out



## 9.4.2 From Sewing Interface

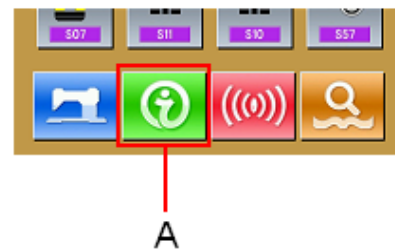
### ① Display of Sewing Interface.

In the interface of data input, press  to have access to the interface of sewing.

### ② Display of Production Control

In the sewing interface, press information key (A) to activate the interface of production control.

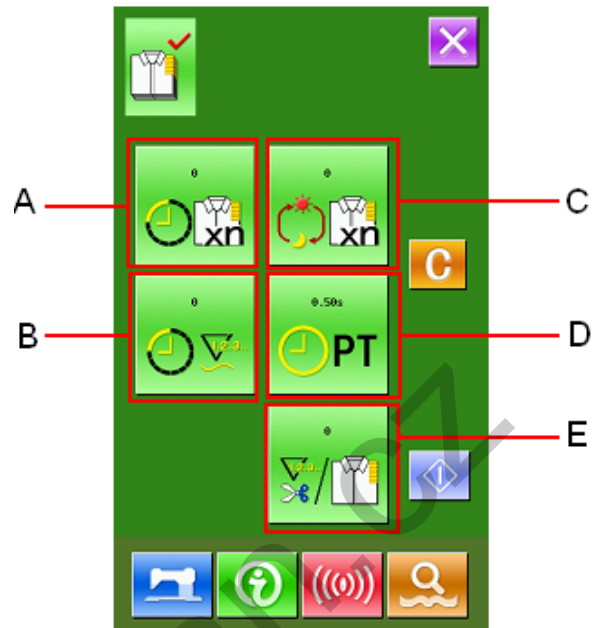
The displayed content and functions are same to the description in 9.4.1.



## 6.5 Setting on Production Control


### ① Display of Production Control Interface

For activating the interface of production control please refer to the chapter 9.4 Production Control Information.



### ② Input Final Target Amount

At first, please input the number of production target pieces in the process to which sewing is performed from now on.

Press final target amount key  (C) to activate the interface of Final target amount input.


Use the number keys and plus/reduce keys to input the wanted figure. After the input,

please press  to confirm



### ③ Input Pitch Time

Then, please input the pitch time at each

progress. Press the pitch time key  (D) at previous page to activate the interface for inputting pitch time.

Use the number keys and plus/reduce keys to input the wanted figure.

After the input, please press  to confirm.



### ④ Input Time for Thread-trimming

Then please input the average times for thread-trimming at each progress. Press





 (E) at the previous page to activate the interface for inputting the time of thread-trimming. Use the number keys and plus/reduce keys to input the wanted

figure. After the input, please press  to confirm




⑤ **Count the amount of production**


Press  (I) to count the amount of production..



Target Amount at Present: press the  to start counting

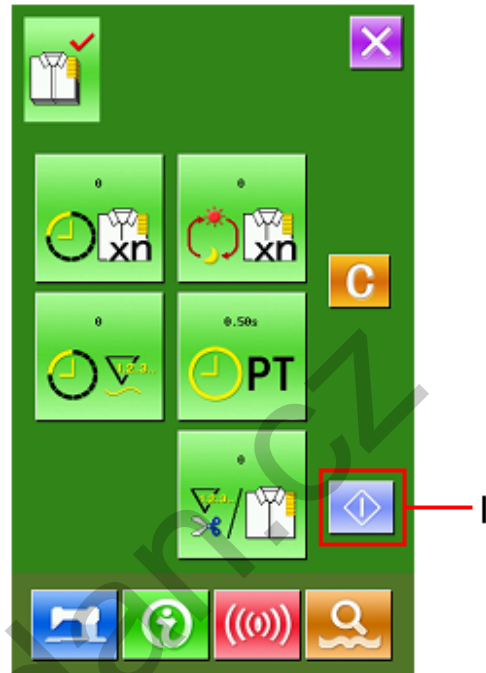
Actual Amount: The system starts counting after entry to the production control interface via the sewing interface.

⑥ **Stop Counting**


In the status of counting, the stop key  is displayed. Press that key to stop



counting. After the stop,  will be displayed at the position of the stop key. If user needs continue counting, please

press . Without pressing , the value will not be cleared.



⑦ **Clear the Data in Counter**

For clearing the value in counter, user shall stop the counter first and then press . Values in Target Amount at

Present  and Actual Value  can be cleared.

(Remarks: the Clear Key can only be displayed when the counter is stopped)


After pressing , user can have the interface for clearance confirmation activated.

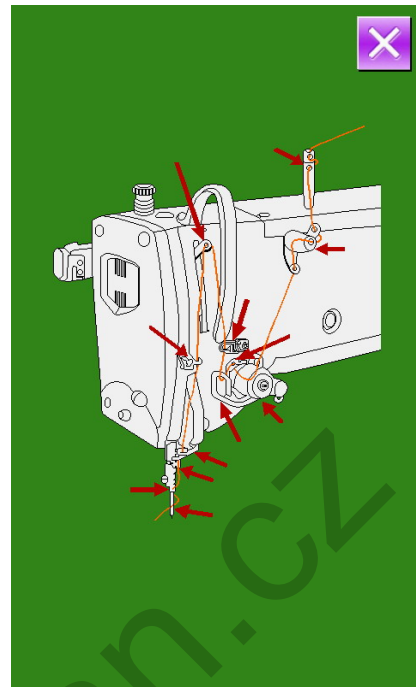
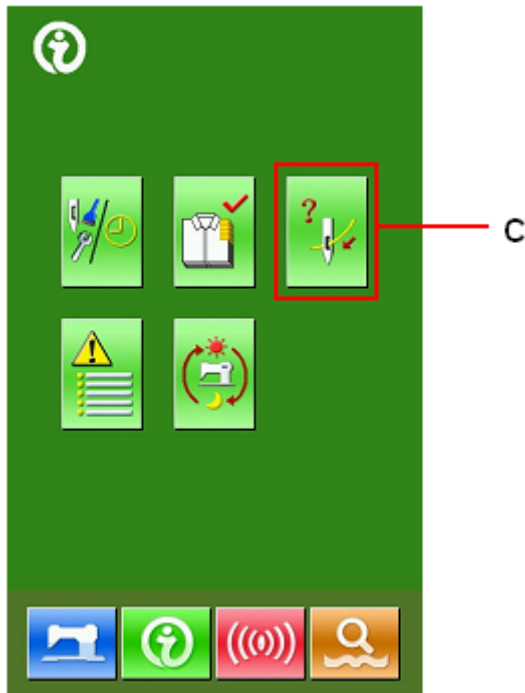
In the interface for confirming clearance,

user can press  to confirm the clearance.




**6.6 Display of Threading Figure**


In the interface of information, press threading key  (C) to activate the threading figure. User can take reference at threading.



### 6.7 Alarm Record

In the interface of maintenance level,

press  to inquire the alarm records.

In the figure , EB301 is the code of error, 7 is the times of happening.


Press  to have access to the detailed information of alarm.

 A screenshot of an alarm record list on a teal background. It features a warning icon with a list at the top left and a purple 'X' icon at the top right. The list contains several entries, each with an error code and a count. On the right side, there are up and down arrow buttons.
 

EB301	7
EB302	8
EB303	5
EB304	1
EB310	1
EB320	1
EB324	6
EB337	1



## 6.8 Running Records

In the interface of maintenance level, user can press  to inquiry the running information of machine.



: Accumulated running time(Hour)



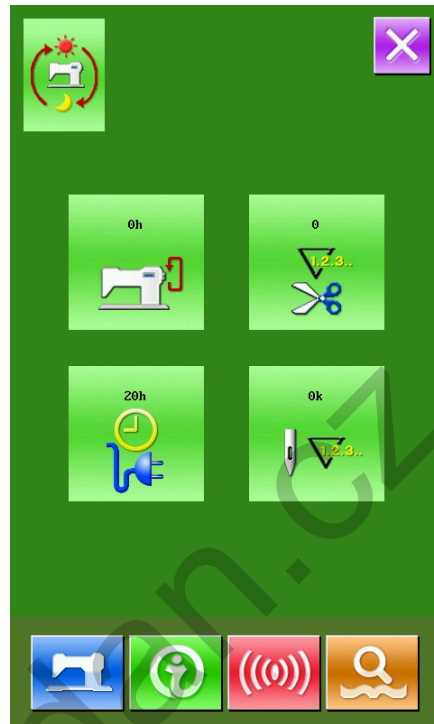
: Accumulated number of pieces sewn



: Accumulated time of power-on (Hour)



: Accumulated number of stitch(1000 stitches as a unit)



# 7 Communication Function

## 7.1 Format of Data

The pattern format supported by this system is the .VDT.:

When saving data to U disk, user shall save it into DH\_PAT file folder, or the file will be unable to be loaded.

## 7.2 Handle the Data

### ① Display of Communication Interface

In the interface of data input, user can

press  to have access to the interface of communication.

### ② Selection of Communication Method

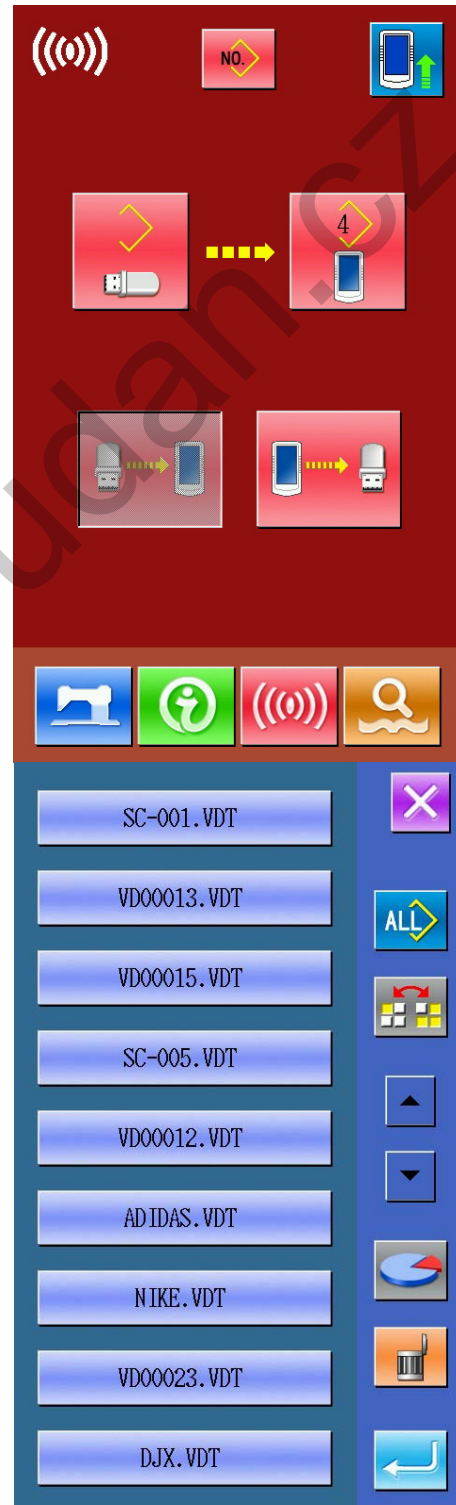
There are two communication methods as shown below:



: Input data from U disk to operational panel




: Input data from operational panel to U disk.



### ③ Operation for Inputting from U Disk to Operational Panel

#### 1) Selection of Pattern in U Disk

press  to activate the interface for selecting the pattern in U disk please select the data file for input:



: Select all




: Reverse



: Deletion




: Free memory

Select inputted pattern; press  to return to the previous interface.

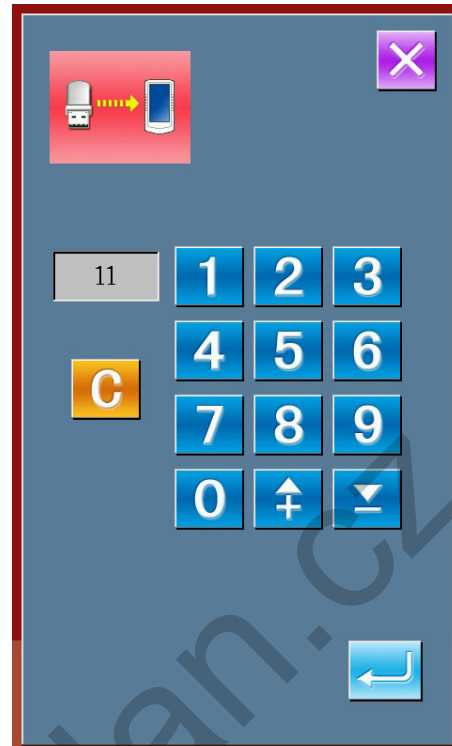
## 2)Confirmation of Memory Number




On the button , the number at above is the empty number, user can choose one as the number for a pattern.

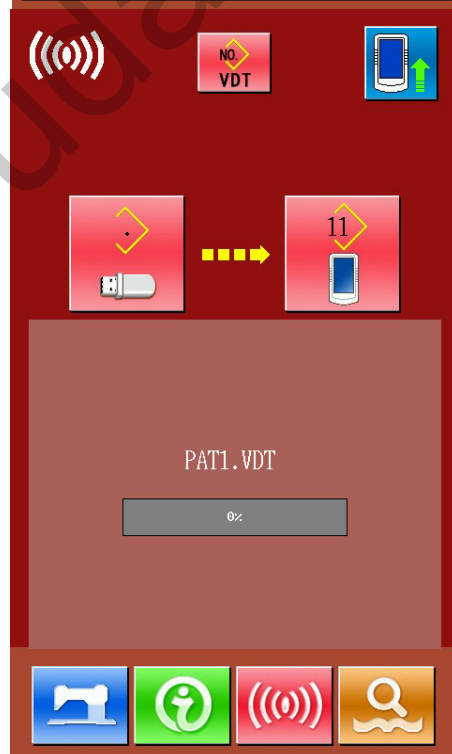
**Attention:** When copying several patterns from the U Disk at one time, user can not set the memory number. The copied patterns will be saved into the empty numbers automatically.

The copied pattern can not replace the existed pattern (this pattern may be quoted in P patterns).




## 3)Start Communication


Press Communication Key  to begin data communication. After the communication, the system will return to the interface of communication.




**④ Operation for Inputting Pattern from Operational Panel to U Disk**

Press  to carry out the Operation of writing data from panel to U disk.


**1) Selection of Pattern in Memory**

Press  to activate the interface for selecting pattern in memory. Please select the data file for input.

-  : select all
-  : reverse
-  : delete
-  : free memory

Select inputted pattern; press  to return to the previous interface



**2) Start Communication**

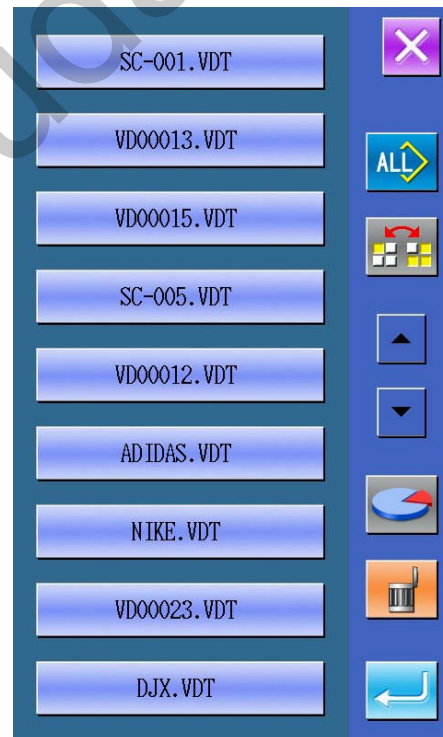
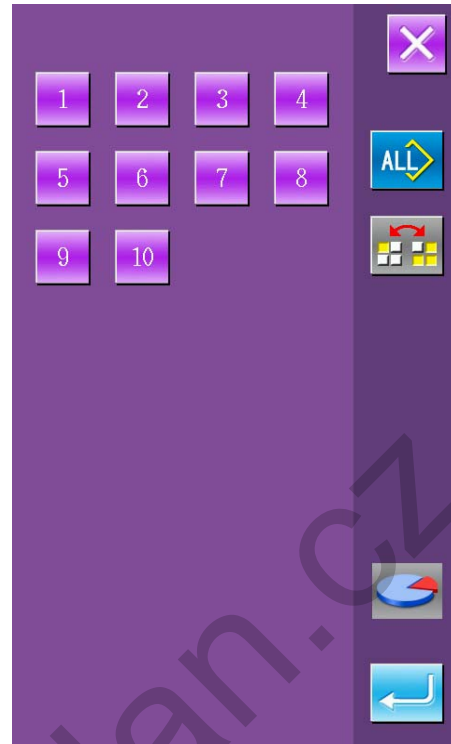
Press Communication Key  (L) to begin data communication. After the communication, the system will return to the interface of communication. If the pattern with the same number exists in the U disk, the system will ask user whether to replace it.

The pattern copied to U Disk will be named as SC-xxx.VDT. The “xxx” is the number of pattern in memory.

**3) U Disk Pattern Deletion**


Before the communication, the user can delete the patterns in U Disk.

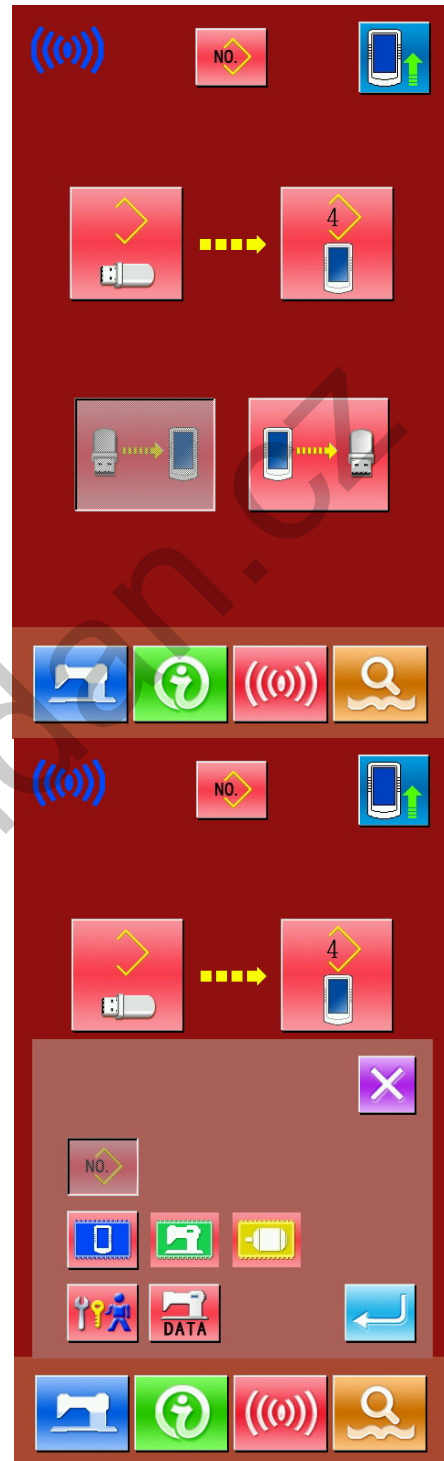
Press  to enter the interface of U Disk Pattern Display, and then press  to delete the patterns in U disk.




## 7.3 Instruction on Update



### ① Display of Communication Interface


In the interface of sewing data, hold  for 3 seconds to have access to the update status (as shown in the right), the figure at upper right corner will turn to blue.





### ② Selection of Update Type


Press  to activate the status of communication operation selection.

Select  and then press  for confirmation.

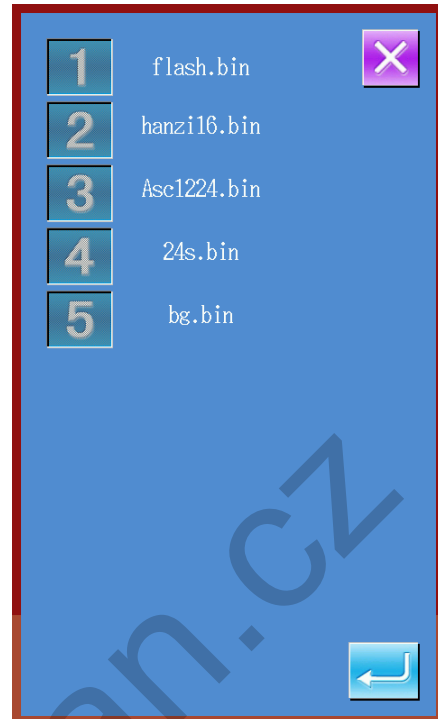
: Control board update

### ③ Selection of Update File

Press  to select the file for update, press  for confirmation.


Press  to start updating. After the updating, repower the machine to finish the update.

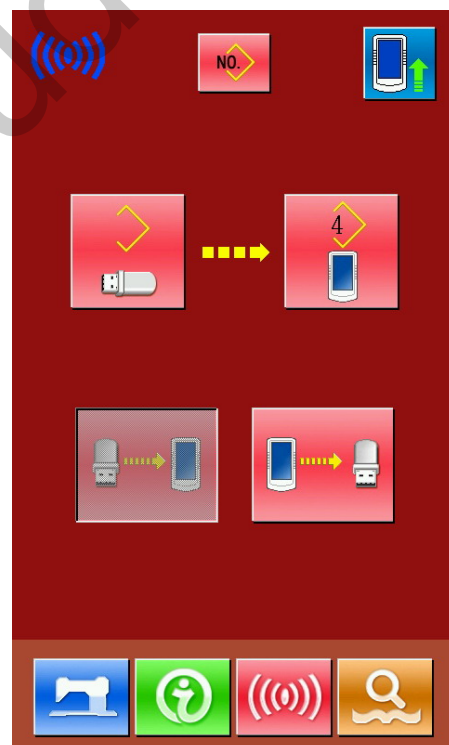
Remarks: For the updating files, please locate them in DH\_PRO file folder.




## 7.4 Instructions on Back-up & Recovery of Parameters



### ① Display of Communication Interface


At sewing data interface, hold  for 3 seconds to have access to the update status (as shown in right). At the moment, the figure at the upper left will become blue.




## ② Selection of Parameter Copy Type

Press  to have access to the status for selecting communicative operations,

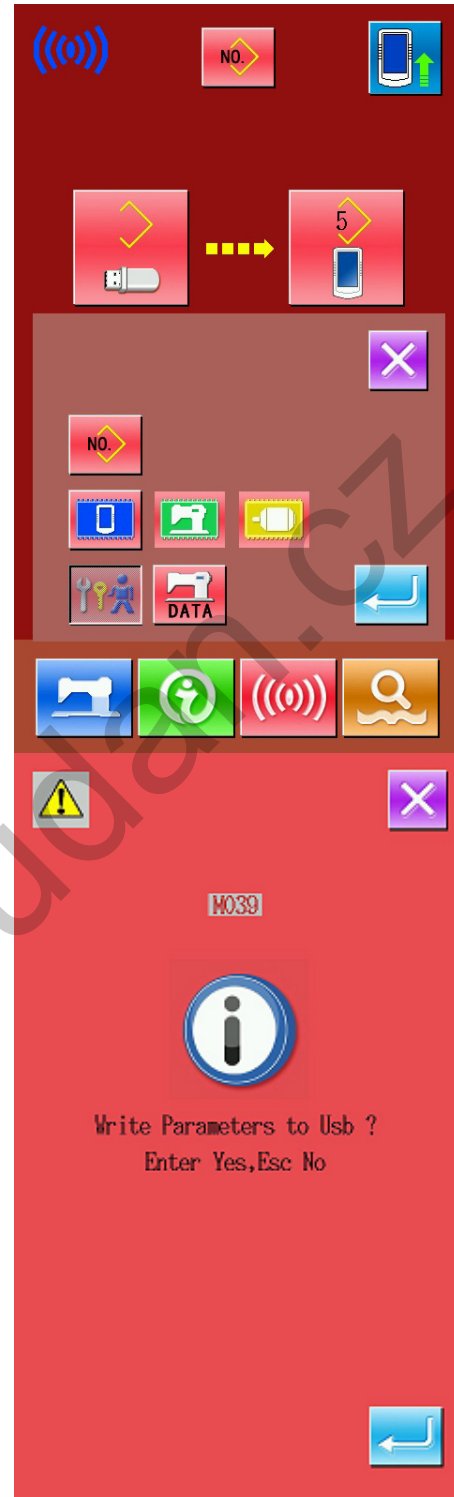
press , and then  for confirmation.

: Parameter transfer

## ③ Copy Parameter from Panel to U Disk (Parameter Back-up)


Press  to set the operation for downloading data from operational panel to U disk.



Press  and  in the interface of information to create a DH\_DAT catalogue in the U Disk automatically. The name of file will be SC-440.SWD.



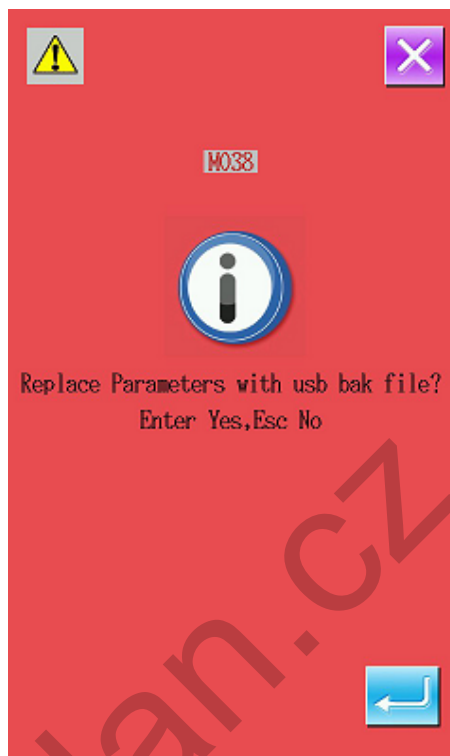
)

#### ④ Copy Parameter from U Disk to Panel (Parameter Recovery)

Press  to set the operation for uploading data from U disk to operational panel.


Press  and  in the interface of information to copy the back-up parameters in U disk to the operational panel for recovery.

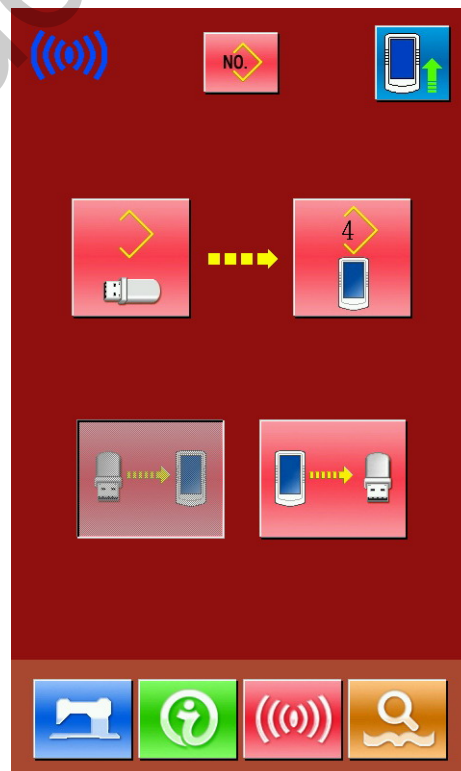
**Before the parameter recovery, the user shall perform the back-up operation according to step 3.**



### 7.5 Instructions on Back-up & Recovery of Pattern Data

#### ① Display of Communication Interface

In the interface of sewing data, hold  for 3 seconds to have access to the update status (as shown in right). At the moment, the figure at the upper left corner will turn blue.






## ② Selection of Parameter Copy Type

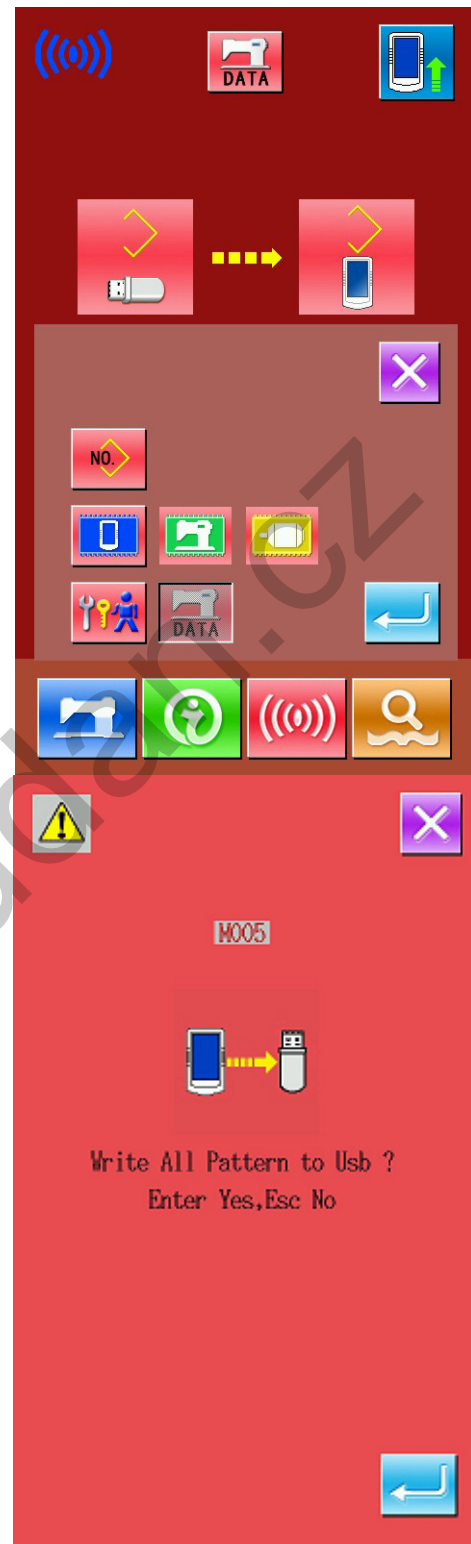
Press  to have access to the status for selecting communicative operations, press  and  for confirmation.

 : Entire Pattern Data Transfer


## ④ Copy Data from Panel to U Disk(Pattern Data Back-up)



Press  to set the operation for downloading data from operational panel to U disk.

Press  and  in the interface of information to create a DH\_DAT catalogue in the U Disk. The name of the file is SC-440.MED.

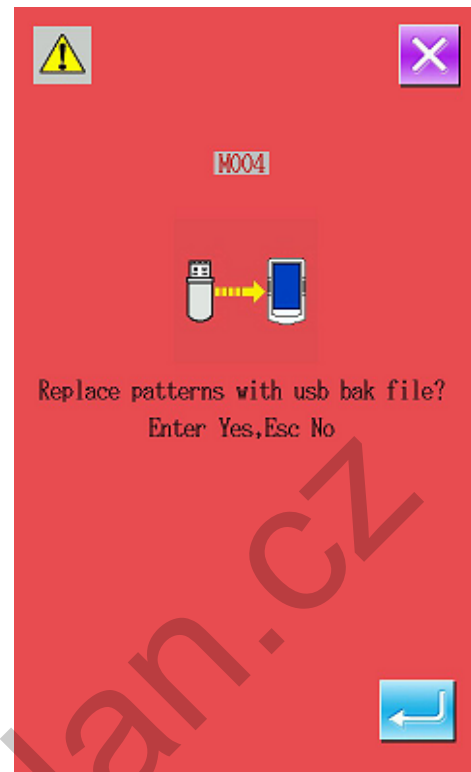


④ Copy data from U Disk to Panel  
(Pattern Data Recovery)

Press  to set the operation for copying data from U disk to operational panel.


Press  and  in the interface of information to copy the pattern data from U disk to the operational panel for recovery.


**For recovering the entire pattern data, please strictly follow the step 3.**



## 8 Setting of Mode & Parameters

### 8.1 Entry to Interface for Setting Mode & Parameter

Press  to shift the data input interface and mode interface (as shown in right). In the mode interface, several detailed operations on setting and edition can be done.

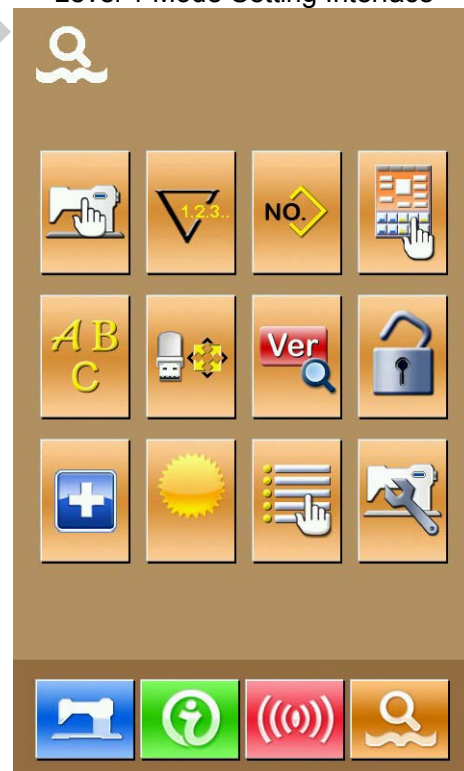
Hold  for 3 seconds to have access to the Mode Setting Level 2 Interface, while holding for 6 seconds to Mode Setting Level 3 Interface.



Level 1 Mode Setting Interface















Level 2 Mode Setting Interface



Level 3 Mode Setting Interface


### Description of Function:

No.	Figure	Function	Content
1		Set parameters in Level 1	Set parameter in level 1 (U)
2		Set counters	Set type of counter, counting value and default value
3		Set type of sewing	Shift between normal pattern sewing and combination pattern sewing
4		Edit pattern	Have access to the pattern edition
5		Initialize U disk	Initialize U disk
6		Software version Inquiry	Inquire the version of panel, main controller and software of motor
7		Keyboard lock	Lock the functions of some adjustable items
8		Testing mode	Test the LCD and external settings of machine
9		Brightness adjustment	Adjust the brightness of LCD
10		Edit parameter switch	Open or close the edition to down parameter.
11		Set parameters in Level 2	Set parameter in level 2 (K)
12		Letter embroidery edition	Set letter embroidery

## 8.2 Level 1 Parameters Setting

### ① Operation for Setting Parameters

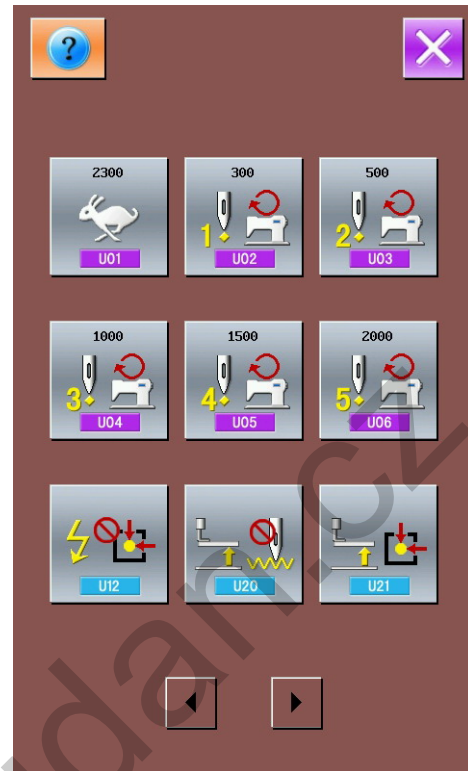



Press  to have access to the interface for setting parameters in level 1 (as shown in right).



: Check the specific information of parameter

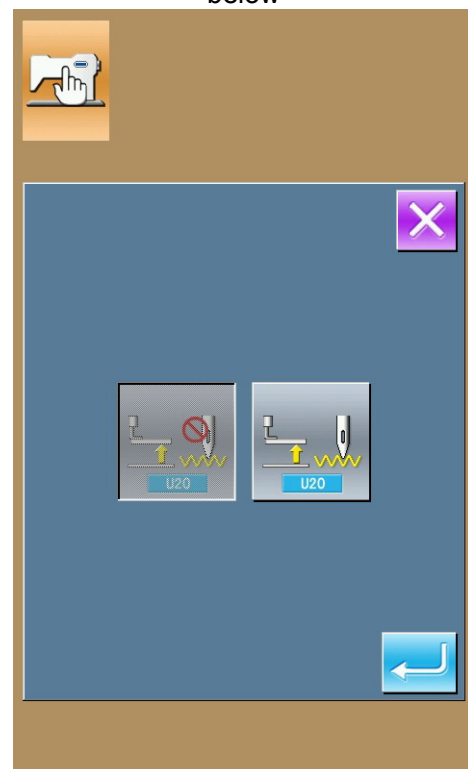
Select the parameter you wish to modify. The parameters with purple background are the parameters of data input type while the parameters with blue background are the parameters of figure selection type. The following is an example:



Press  to enter the interface below







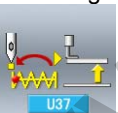

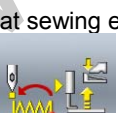
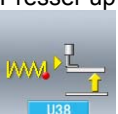














Press  to enter the interface below














### ② Parameters in Level 1

No.	Parameter	Set Range	Editing Step	Default Setting
U01 	Max. Sewing Speed	200~2700	100rpm	2700rpm
U02 	Start Speed of 1st Stitch	200~2700	100rpm	300rpm
U03 	Start Speed of 2nd Stitch	200~2700	100rpm	500rpm
U04 	Start Speed of 3rd Stitch	200~2700	100rpm	1000rpm
U05 	Start Speed of 4th Stitch	200~2700	100rpm	1500rpm
U06 	Start speed of 5th stitch	200~2700	100rpm	2000rpm
U12  : Not return  : Return	Return to 0 point at turning on	0: Not return 1: Return		0: Not return
U20  : unable to sew  : able to sew	Able to sew when pressing board up	0: unable to sew 1: able to sew		0: unable to sew
U21  : Enable to return to origin  : Forbid to	Can't return to origin when pressing board up	0: Enable to return 1: Forbid to return		0: Enable to return






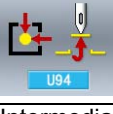
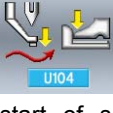
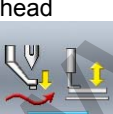



No.	Parameter	Set Range	Editing Step	Default Setting
	return			
U22	Needle down position return to origin forbidden  : Enable to return to origin  : Forbid to return	0: Enable to return 1: Forbid to return		1: Forbid to return
U25	Unit for sewing counter 	1~30	1	1
U32	Buzzer voice setting  : mute  : Control panel voice  : Control panel voice + alarm	0: Mute 1: Control panel voice 2: Control panel voice + alarm		2: 操作盘+报警音
U37	Presser status at ending of sewing  : Presser up at sewing start  : Up promptly at sewing end  : Control pedal Up at sewing start	0: Presser up at sewing start 1: Up promptly at sewing end 2: Control pedal Up at sewing start		0: Presser up at sewing start
U38	Presser up at work finish  : presser up permitted  : presser up forbidden	0: presser up permitted 1: presser up forbidden		0: presser up permitted


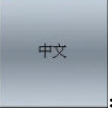

No.	Parameter	Set Range	Editing Step	Default Setting
	forbidden			
U39	Search origin at sewing end  : Without searching origin  : With searching origin	0: Without searching origin 1: With searching origin		0: Without searching origin
U40	Origin search at setting group sewing  : 0: No origin search  : Search at a pattern sewing end  : Search at a circle sewing end	0: No origin search 1: Search at a pattern sewing end 2: Search at a circle sewing end		0: No origin search
U48	Set start sewing point recovery path.  : Linear recovery  : Return in sewing path  : Search origin	0: Linear recovery 1: Return in sewing path 2: Search origin		0: Linear recovery
U49	Winding speed 	200~2700	100rpm	1300rpm
U50	Winder operation effective  : not effective  : effective	0: not effective 1: effective		1: effective



No.	Parameter	Set Range	Editing Step	Default Setting
U52	Thread stirring switch  : off  : on	0: off 1: on		1: on
U53	Needle position at pause  : Needle down position  : Needle up position	0 : Needle down position 1: Needle up position		1: Needle up position
U54	Pressing board action at pause  : board down  : board up	0: board down 1: board up		0: board down
U55	Pause switch type  : self-lock  : normal	0: self-lock 1: normal		0: self-lock
U56	Automatic thread-trimming at pause  : Automatic thread-trimming  : Manual thread-trimming	0 : Automatic thread-trimming 1: Manual thread-trimming		0 : Automatic thread-trimming
U60	Thread-trimming switch  : Off	0: Off 1: On		1: On

No.	Parameter	Set Range	Editing Step	Default Setting
	 : On			
U61	 Thread-trimming speed	200~400	100rpm	400rpm
U62	Needle location angle after trimming  : upper position  : highest position	0: upper position 1: highest position		0: upper position
U64	Size changing unit  : Percent input  : Actual size input	0: Percent input 1: Actual size input		0: Percent input
U71	Thread-breakage detection  : not effective  : effective	0: not effective 1: effective		0: not effective
U72	 Sewn invalid stitch number at start in thread break detect	0~15	1	8
U73	 Sewn invalid stitch number at midway in thread break detect	0~15	1	3
U88	Scale Mode  : Forbidden  : Change pitch	0: Forbidden 1: Change Pitch 2: Change Stitch Number		1: Change Pitch


No.	Parameter	Set Range	Editing Step	Default Setting
	 U88 : Change stitch number			
U89	Move mode  U89 : forbidden  U89 : move in parallel  U89 : Set 2nd origin	0: Forbidden 1: Parallel move 2: Set 2nd origin		2: Set 2nd origin
U94	Select highest point at searching origin  U94 : no  U94 : yes	0: no 1: yes		0: no
U104	Intermediate presser down synchronization  U104 : Before the start of sewing machine head  U104 : Same pace with last out presser	0: Before the start of sewing machine head 1: Same pace with last out presser		0: Before the start of sewing machine head
U129	Needle cooling  U129 : no  U129 : yes	0: no 1: yes		0: no
U150	Pattern idling display  U150 : no	0: no 1: yes		1: yes

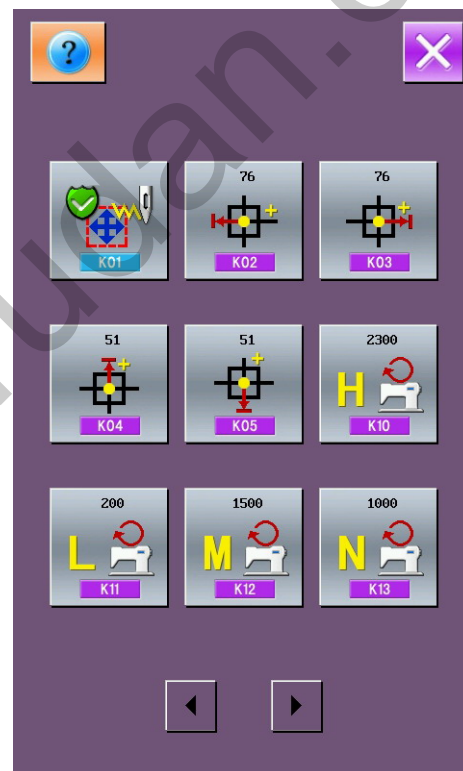
No.	Parameter	Set Range	Editing Step	Default Setting
	 : yes			
U200	Language selection  : Chinese  : English	0: Chinese 1: English		0: Chinese

### 8.3 Level 2 Parameters Setting



#### ① Operation for Setting Parameters

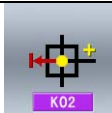

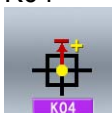


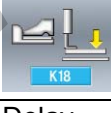

In the interface of Mode Setting Level








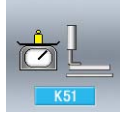
3, press  to enter the interface for setting parameters of Level 2 (as shown in the right figure). For the operations, please take the descriptions in Set Parameter of Level 1 for reference.








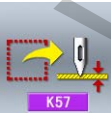


















#### ⑤ Parameters in Level 2

No.	Parameter	Setting Range	Editing Unit	Default value
K01	Cancel range protection  : off  : on	0: off 1: on		0: off
K02	Set valid range for X Left direction	0~255	1mm	76mm


No.	Parameter	Setting Range	Editing Unit	Default value
				
K03 	Set valid range for X Right direction	0~255	1mm	76mm
K04 	Set valid range for Y Upper direction	0~255	1mm	51mm
K05 	Set valid range for Y Down direction	0~255	1mm	51mm
K10 	High speed setting	200~2700	100rpm	2700rpm
K11 	Low speed setting	200~2700	100rpm	200rpm
K12 	Middle-high Speed Setting	200~2700	100rpm	1500rpm
K13 	Middle-low Speed Setting	200~2700	100rpm	1000rpm
K18  	Single pedal operation permission : forbidden : permitted	0: forbidden 1: permitted		0: forbidden
K30 	Delay at turning on thread-trimming	0~2.55	0.01 s	0.12 s
K31 	Trimming output start time/angle	0~998	2mm degree	50mm degree

No.	Parameter	Setting Range	Editing Unit	Default value
K32 	Trimming output end time/angle	0~998	2mm degree	0mm degree
K35 	Delay at turning on thread-loosing	0~255	1	0
K36 	Thread-loosing start time/angle	0~998	2 mm  degree	196mm degree
K37 	Thread-loosing end time/angle	0~998	2 mm degree	0mm degree
K40 	Thread-stirring turning on time	0~998	2 ms	30 ms
K41 	Thread-stirring keeping time	0~998	2 ms	30 ms
K50 	Pressing board type selection	0: driven by air 1: magnet 2: self-adaptation		0: driven by air
K51 	Pressing board weight	0: light 1: middle 2: heavy		1: middle

No.	Parameter	Setting Range	Editing Unit	Default value
	 : middle  : heavy			
K52	Light pressing board(volume L) 	0~255	1	145
K53	Middle pressing board(volume M) 	0~255	1	0
K54	Heavy pressing board(volume H) 	0~255	1	0
K55	Sewing type  : thin  : middle  : thick	0: thin 1: middle 2: thick		0: thin
K56	Thin material for sewing 	0~255	1	0
K57	Middle material for sewing 	0~255	1	0
K58	Thick material for sewing 	0~255	1	0
K59	Middle presser current 	2~8	1	4


No.	Parameter	Setting Range	Editing Unit	Default value
K60	Level 3 Pedal Action  : Forbidden  : Action	0: No 1: Yes		0
K61	Main-shaft motor stop angle 	30~80	1	53
K92	Ordinary origin search/ origin recovery path selection	 0: Standard	—	0
		 1: Reverse		
		 2: Y Axis →X Axis		
		 3: X Axis →Y Axis		
K93	Origin search/ origin recovery path selection at reverse	 0: Standard	—	0
		 1: Reverse		
		 2 : Y Axis→X Axis		
		 3: X Axis →Y Axis		
K110	Reverse device  : without  : with	0: without 1: with		0: without
K111	Reverse device auto reversing Y coordinates 	0~100.0mm	0.1	17.0
K190	Adjustment on button sensitivity 	1~5	1	3



No.	Parameter	Setting Range	Editing Unit	Default value
K200 	Recover to default values			

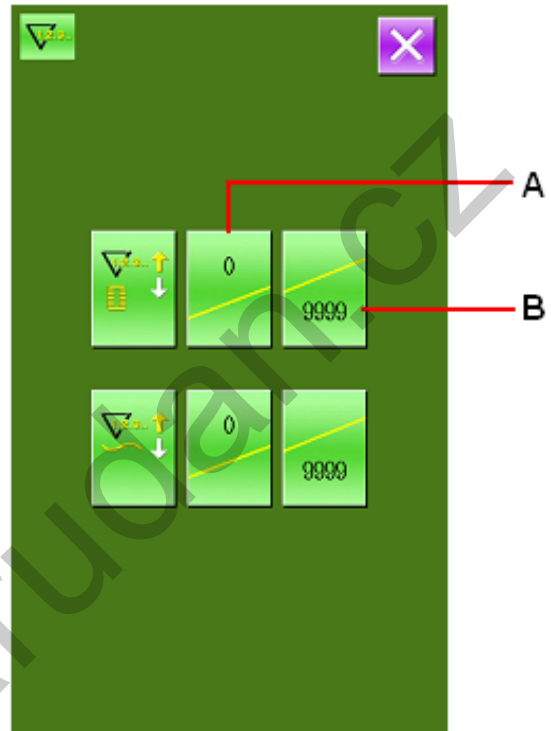
## 8.4 Counter Setting





Press  to have access to the interface for setting counter (as shown in right).

### ① Set existing value and set value of counter

A is the existing value of the counter. Press that figure to enter the interface for setting the existing value of counter. B is the set value. When the set value is 0, the counter can only count number and can't send warning. Press that figure to enter the interface for setting the set value of counter.




### ② Selection on Sewing Counter

Press  or  to have access to the interface for selecting counter type



: Sewing UP Counter


Every time the sewing of one shape is performed, the existing value is counted up. When the existing value is equal to the set value, the interface of counter exceed warning will be

displayed. Press , the existing value will be restored to the set value.



: Sewing DOWN Counter

Every time the sewing of one shape is performed. The existing value is counted down. When the existing value is reached to "0", the interface of counter exceed warning will be

displayed. Press , the existing value of counter will be recovered to 9999.






: Sewing Counter off

③ Select the type of No. of Piece Counter



: No. of Piece UP Counter

Every time one cycle stitching is performed, the existing value is counted up. When the existing value is equal to the set value, the interface of counter exceed warning will be displayed. Press  to restore the existing value of counter to the set value



: No. of Piece DOWN Counter


Every time one cycle stitching is performed, the existing value is counted up. When the existing value is equal to the set value, the interface of counter exceed warning will be displayed. The existing value of counter will be restored to 9999.



: No. of piece counter off

## 8.5 Entry to Pattern Edition





Press  to have access to the interface of selection on edition mode and sewing mode (as shown in right).

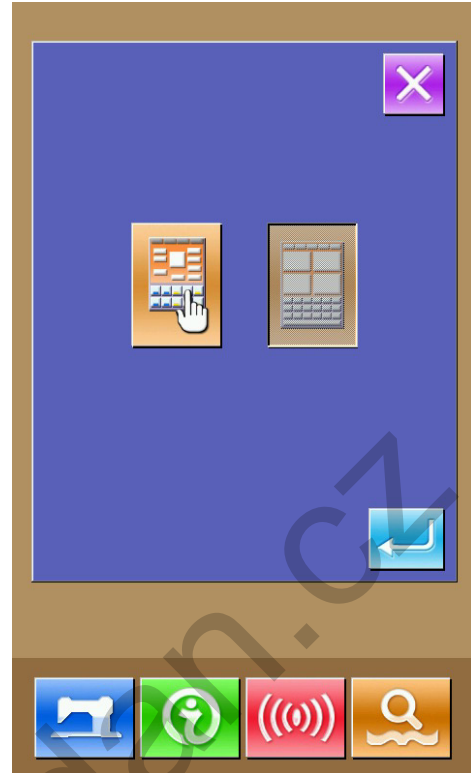


: Sewing Mode




: Edition Mode


Select the edition mode and  &  to have access to the interface of pattern edition.

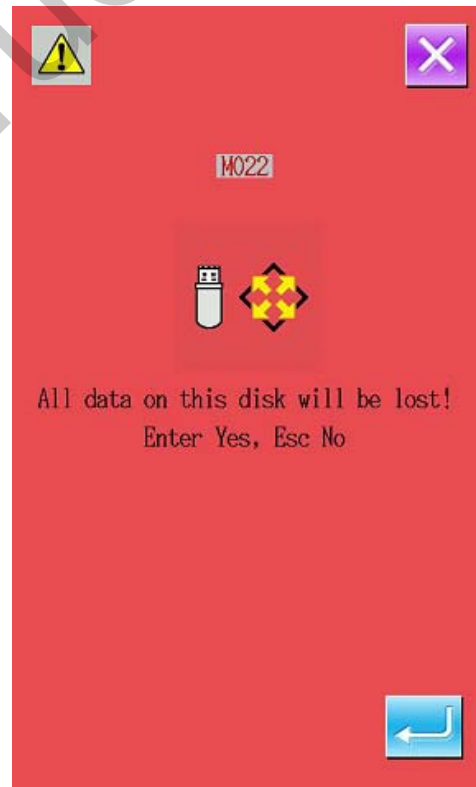


## 8.6 Initialize U Disk




In the setting mode level 2, press  to have access to the interface of U disk initialization setting.

Press  to delete the entire data in U disk.



## 8.7 Software Version Inquiry

In the setting mode level 2, press  to inquire the version of software in this system.



: Version of Panel



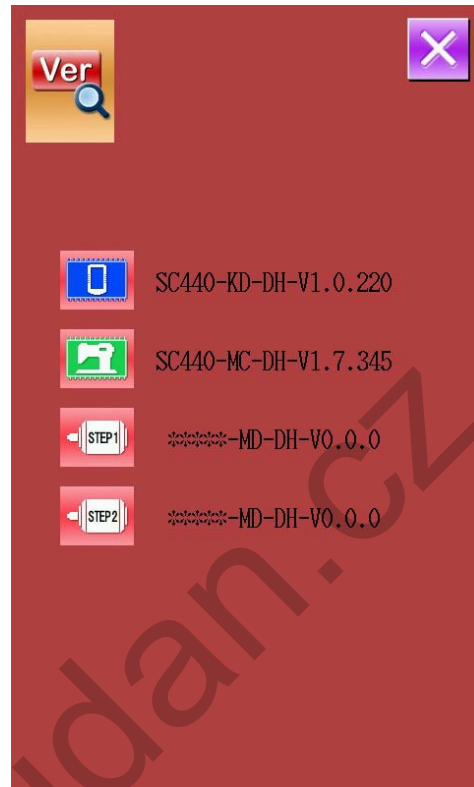
: Version of Main Controller




: Version of Main-shaft Motor



: Version of Stepping Motor



## 8.8 Shift of Sewing Type

Press  to have access to the interface for selecting Type of sewing (as shown in right).





: Normal Pattern Sewing

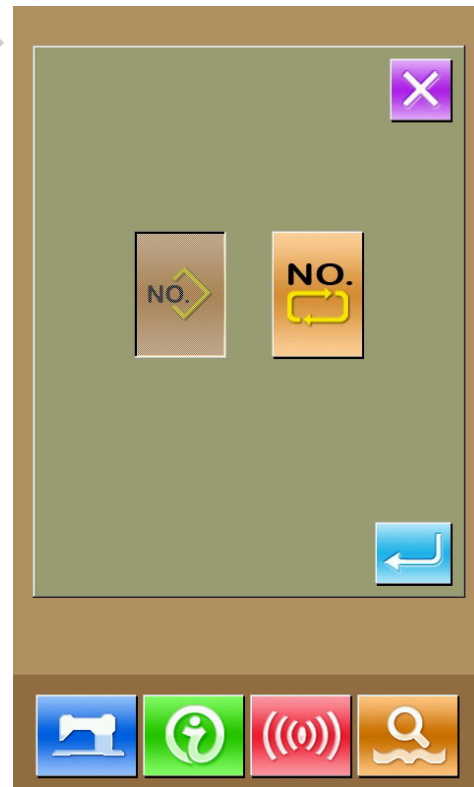


: Combination Pattern Sewing

After confirming the sewing type, user can

press  to end this operation. And then


press  to activate the interface of data input for the selected sewing type.



## 8.9 Testing Mode

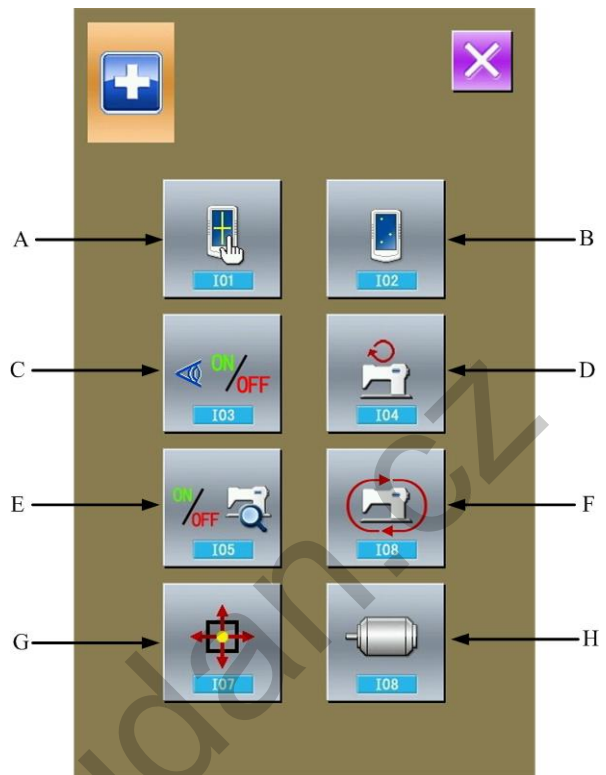
In the interface of level 2 mode setting,



press  to have access to the interface of testing mode(as shown in right).

The description of figures are provided as below:



No.	Name
A	I01 Touching Panel Correction
B	I02 LCD Test
C	I03 Input Test
D	I04 Speed Measurement
E	I05 Output Test
F	I06 Continuous Running
G	I07 XY Motor Origin Test
H	I08 Main-shaft Motor Correction

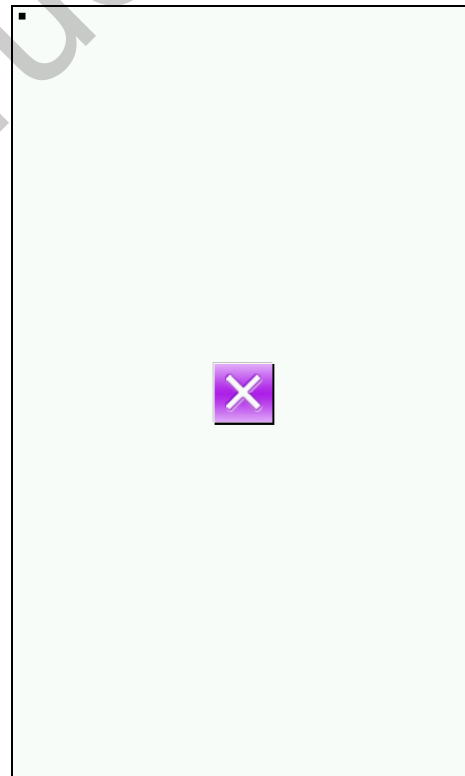


### (1) Touching Panel Correction

In the interface of testing mode, press



 (I01 touching panel correction) to have access to the interface of touching panel correction (as shown in the right). The corrections on four spots are needed at all, so we advise user to click the black spot with tool like touching pen. The system will automatically return to the previous interface after the correction. For cancel the correction operation, please press  to quit.



## (2) LCD Test

In the interface of testing mode, press



(I02 LCD Test) to have access to the interface for testing LCD (as shown in the right). User can check the condition of LCD under this status.



## (3) Test Method on Input Signal

In the interface of testing mode, press



(I03 Input Test) to have access to the interface of input test (as shown in the right). User can confirm the input status of the various sensors and switches in that interface.

ON: Turn on

OFF: Turn off

A: Start Switch(pedal)

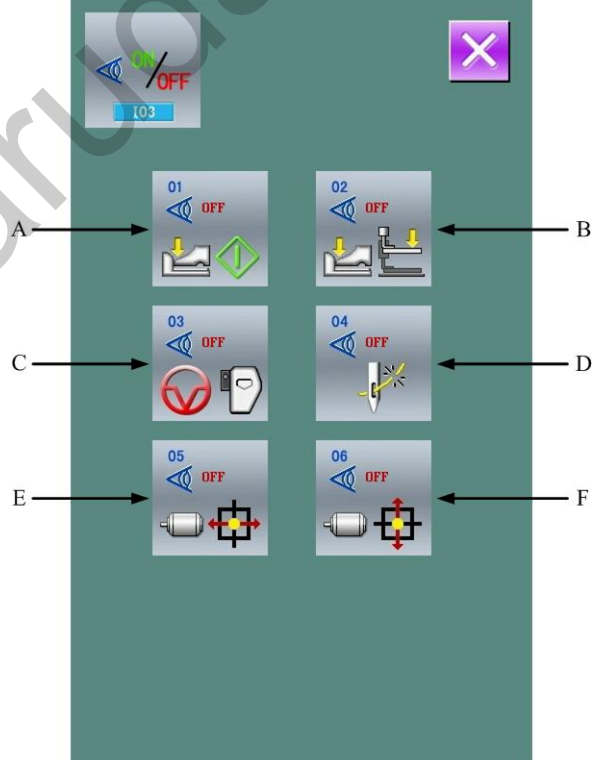
B: Presser Switch(pedal)

C: Pause Switch

D: thread-breakage Detection

E: X Motor Sensor


F: Y Motor Sensor








#### (4)Speed Measurement

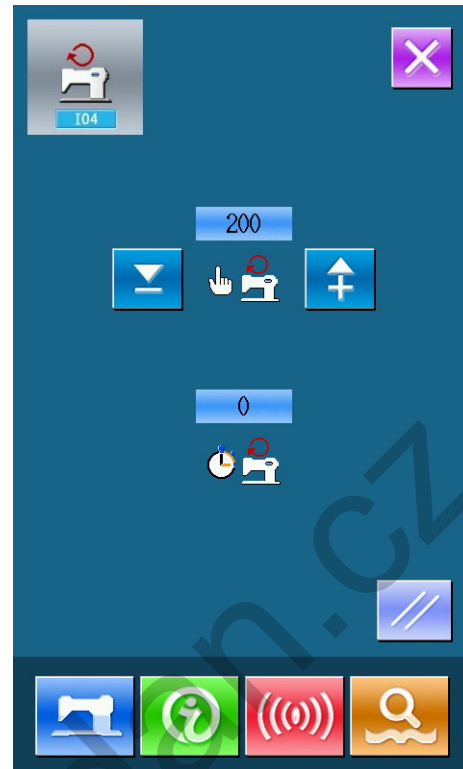
##### ① Display of Speed Measurement Interface

In the interface of testing mode,

press  (104 Speed Measurement) to have access to the interface of speed testing (as shown in right). User can test the speed of main shaft motor in this interface.


##### ② Speed Measurement Setting

With  & , user can set the speed of main shaft motor. After  is pressed, the main shaft motor will run in the set speed. At this time, the actual speed measured is shown at . Press  to stop the machine.



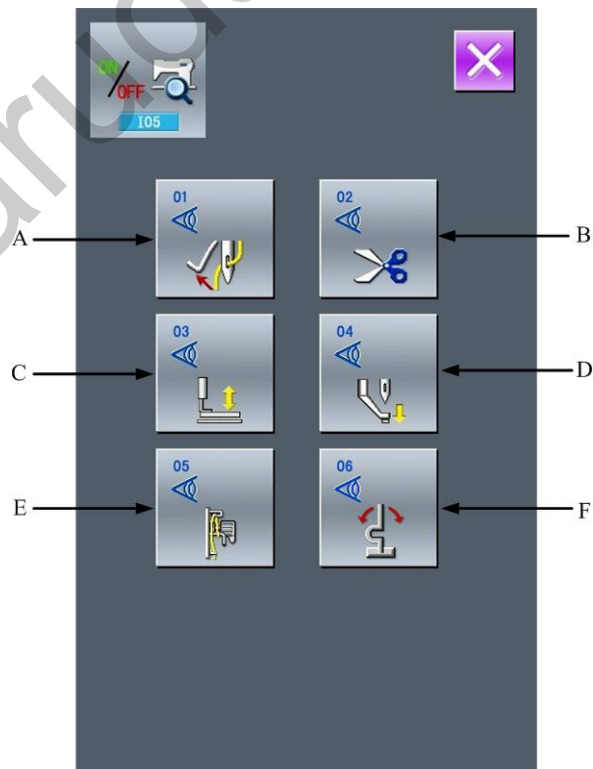
#### (5)Method for Testing Output

In this interface of testing mode,

press  (105 Output Test) to have access to the interface of output test (as shown in right). In the interface, user is able to test the output state of solenoid.

- A: Thread-stirring
- B: Thread-trimming
- C: Presser
- D: Intermediate presser
- E: Thread-loosing
- F: Presser reverse


Press the corresponding figure to check the output condition of each external setting.



## (6) Continuous Running

### ① Display of Continuous Running Interface

In the interface of testing mode,

press  (106 continuous running) to have access to the interface of Continuous Running (as shown in right).



: Action interval




: Gusseting origin inspection




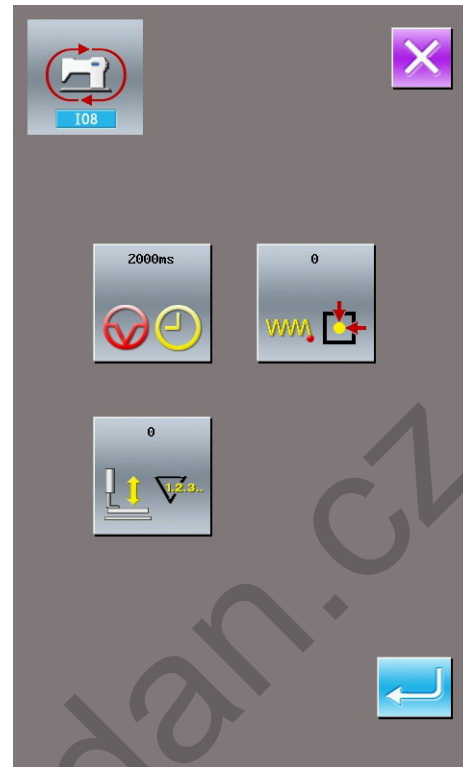
: Time for Presser Lifting

### ② Continuous Running Setting

Press the figure for setting in the interface of continuous running to set the action interval and gusseting

origin inspection. Press  to return to the interface for data input. Then


press  and step the pedal to allow machine to run continuously.

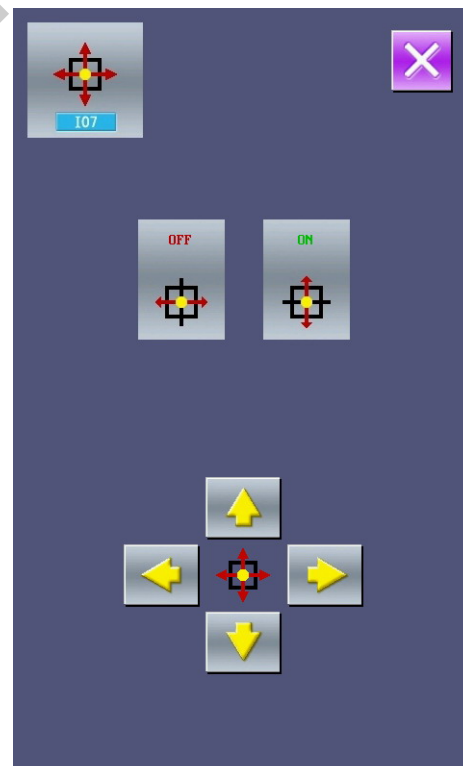


## (7) XY Motor Origin Sensor Detection

In the interface of testing mode, press



 (107XY Motor Origin Sensor Detection) to have access to the interface of output test (as shown in right). In that interface, user can move the motor with the direction keys so that the status of sensor (ON/OFF) can be displayed.






## (8) Main Shaft Motor Correction



In the interface of testing mode,

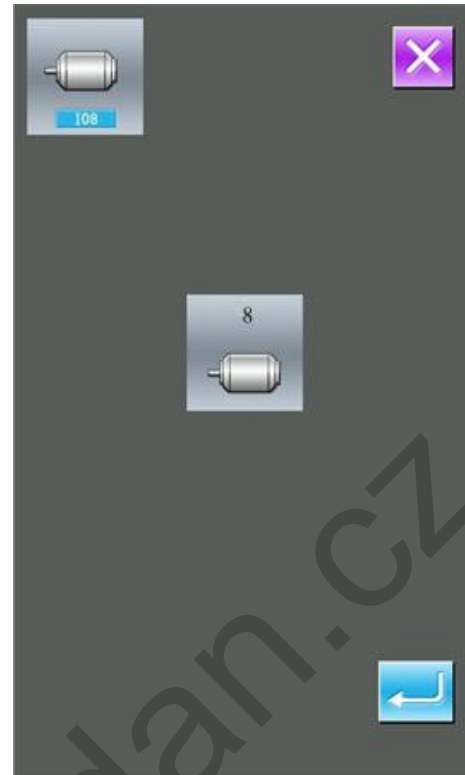


press  to have access to the interface of Main shaft motor correction (as shown in right).

Turn the hand-wheel of machine to move the needle bar to the highest position. At this time, the angle of main-shaft motor can be displayed on




the figure of ; Press  to automatically save it in to the system and correct the angle of main shaft motor in future.




## 8.10 Brightness Adjustment

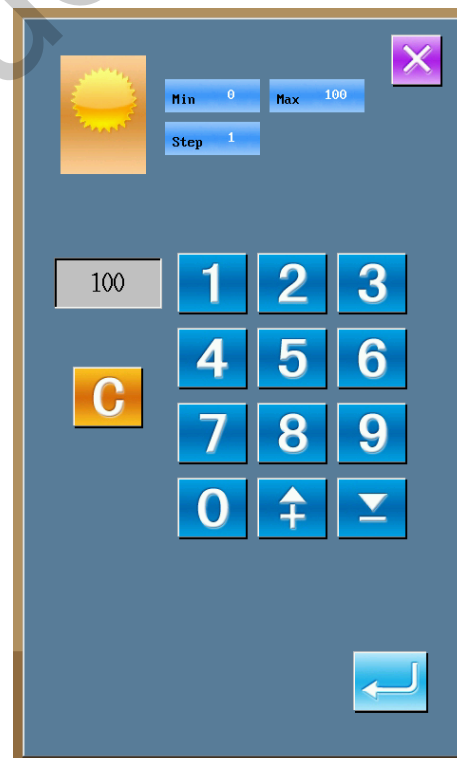
In the level 2 Mode Setting interface, press



 to have access to the interface of brightness adjustment (as shown in the right). The user can adjust the brightness from


0~100 with  &  or the number keys.

Then press  to finish the operation.





## 8.11 Keyboard Lock



In level 2 Mode Setting interface,

press  to have access to the interface for locking keyboard.

### ① Keyboard Lock Operation|

 : Keyboard lock is unset.


 : Keyboard lock is set.

Select  and press  to lock the keyboard.



### ② Display of Keyboard Lock Status

Close the interface of parameter setting and return to the interface of data input (as shown in right). In that interface, user can see a figure

“” shown under the pattern number. In the status of locking keyboard, only the available figures can be seen

### ③ Range for Locking Keyboard

1. Normal Sewing Data Input Interface:

- Pattern registration
- Pattern naming
- Scaling rate setting
- Max. speed Limitation
- P pattern registration
- Pattern deletion

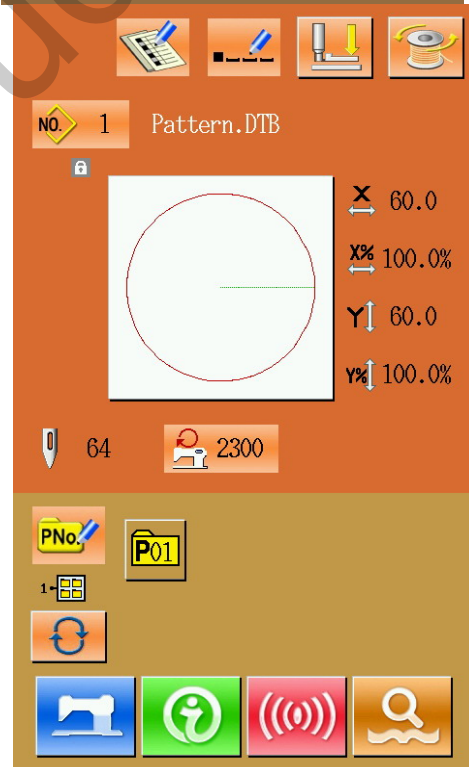
2. Normal Sewing Interface:

- Frame-moving
- Counter setting

3. P Pattern Input Interface:

- P pattern edition
- 2)P pattern copy
- 3)P pattern naming
- 4)Pattern deletion

4. P Pattern Sewing Interface:  
Counter Setting



5. C Pattern Data Input Interface:

C pattern registration

C pattern copy

C pattern naming

C pattern edition

Pattern deletion

6. C pattern Sewing Interface:

Counter setting

7. Parameter Setting Mode:

Parameter level 1

Parameter level 2

3)Counter Edition

4)Testing Mode

## 8.12 Pattern Edition Parameter Setting


In the Level 3 Setting Mode interface, press

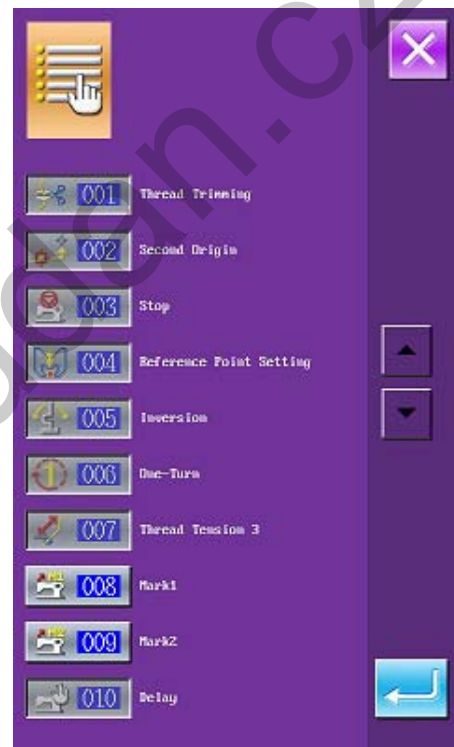


to have access to the interface for setting the pattern edition parameter.

The figures in dark are the functions available while the figures in brightness are the functions forbidden.

Edit the parameter according to the needs,

press  to finish setting.



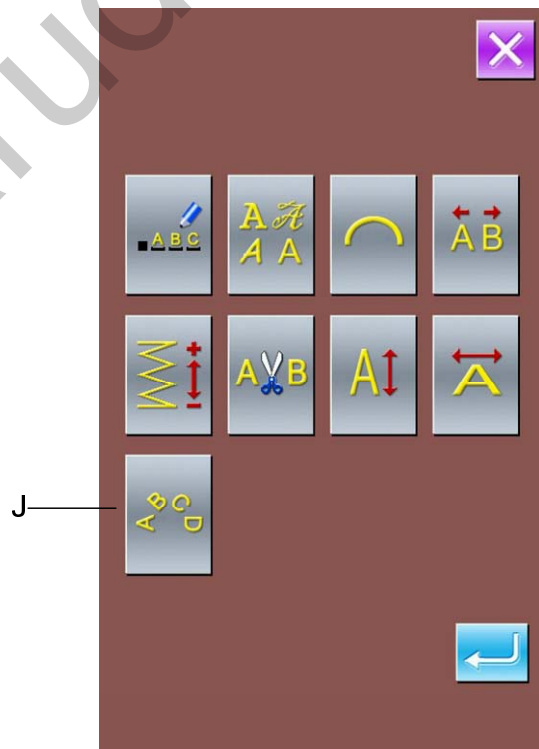
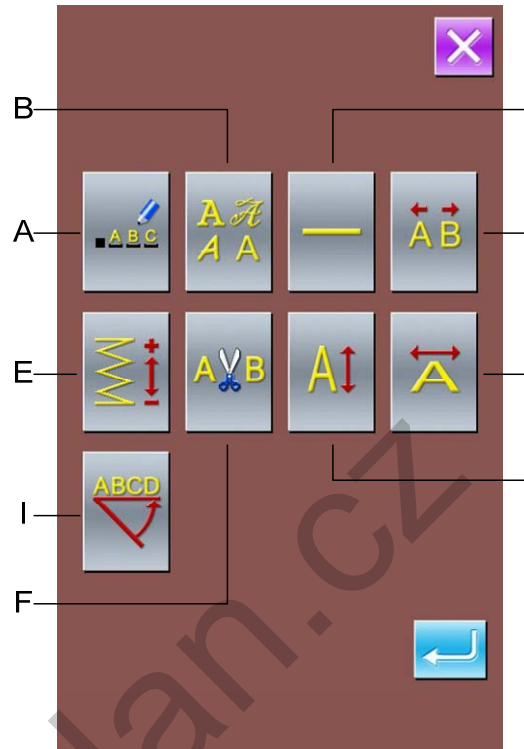
## 8.13 Letter Embroidery Edition

### 8.13.1 Parameter Setting



Select **A** to have access to the interface for setting the parameters of letter embroidery, as shown in Figure 1. If the array of character string (Key C in Figure 1) is selected as arc, the parameter interface will be shown as Figure 2. The functions of each key are shown in the table below.

Number	Code
A	Letter Input
B	Selection of Font
C	Array Method
D	Letter Pitch
E	Density of Satin
F	Auto Trimming Selection
G	Scaling in Height
H	Scaling in Width
I	Angle for Rotation of Letter
J	Letter Angle is fixed or not



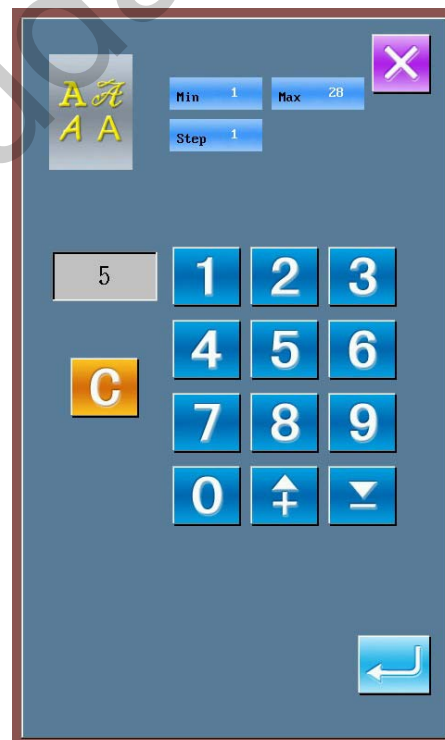
**(1)Letter Input**

At least input a letter. 20 letters can be inputted at most.



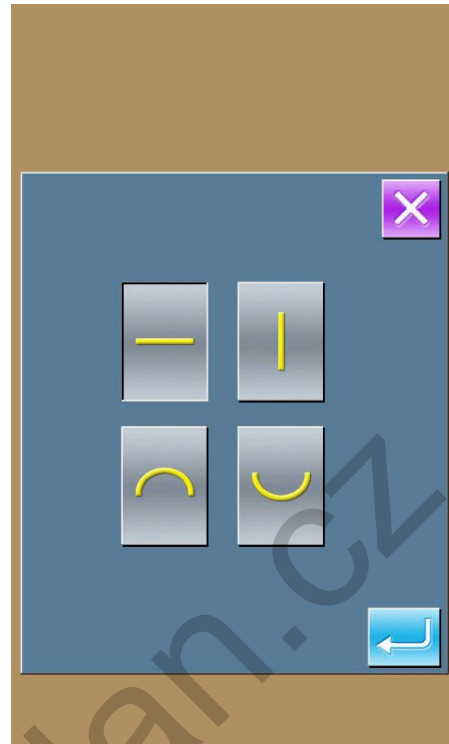
**(2)Selection of Font**

28 kinds of font can be provided. User can press number from 1~28 for selection.



### (3) Array Method

Four kinds of array methods are included: horizontal array, vertical array, upper semi-circle and down semi-circle.



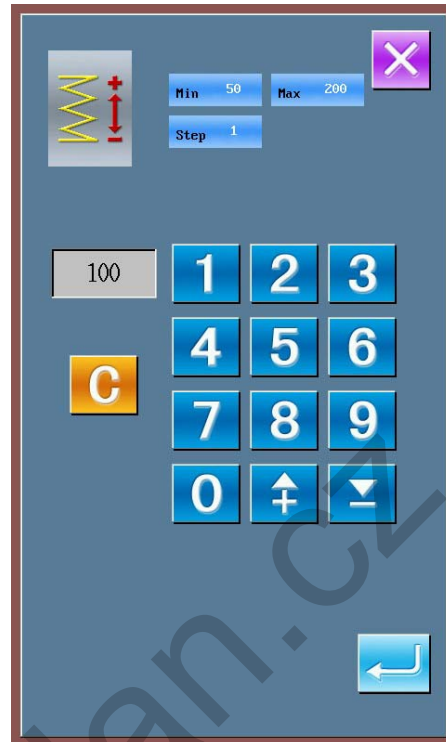
### (4) Letter Pitch

In case of horizontal array, this parameter is the horizontal pitch between each letter; in case of vertical array, this parameter is the vertical pitch between each letter; in case of arc array, this parameter is the distance on the arc between each letter.



**(5) Density of Satin**

The Density of Satin can be set between 50~200.



**(6) Auto Trimming Selection**

Select Auto Trimming Selection to insert the trimming action in the created letter embroidery pattern.



**(7)Scaling in Height**

Set the scale of the letter in height, the range is 50%~200%.



**(8)Scaling in Width**

Set the scale of the letter in width, the range is 50%~200%.





**(9) Angle for Rotation of Letter**

If the array of character string is selected at Horizontal or Vertical, the angle for the counterclockwise rotation of the string is in the range from 0°~359°.






**(10) Letter Angle is fixed or not**



When the array of string is upper semi-circle and down semi-circle, user can set whether the angle of the letter is rotated with the arc.



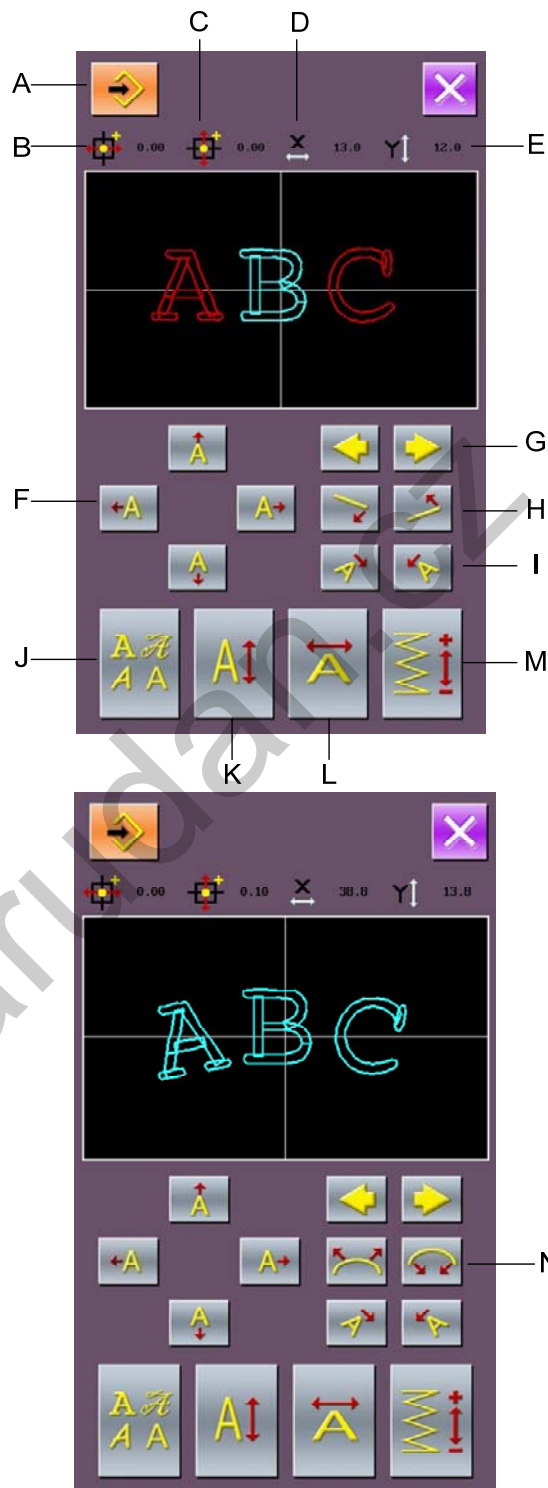
**8.13.2 Adjustment of Letter Pattern**

Set the various parameters in the letter embroidery parameter interface and press  to have access to the interface for adjusting the letter pattern.

If user selects  or , the interface like Figure 1 will be displayed.







If user selects  or , the interface like figure 2 will be displayed. For the functions of each key, please refer to the function instruction.

The selected figure is displayed in blue while the unselected are shown in red. In case of adjusting pattern, the adjustment of the row character string is the priority. In case of linear array, the rotation angle of the string can be adjusted; in case of the arc array, the adjustment of the radian is available. Then the adjustments of each single character will be carried out, including the position and the rotating angle of the figure.




**Function Description:**

Code	Functions	Description
A	Save Pattern	Enter the pattern save interface after selection.
B	Figure Coordinate in X Axis	When you select the single figure, the coordinate of the center point of the selected figure in X axis will be displayed; when you select the entire figures, the coordinate of the center point of the string in X axis will be displayed
C	Figure Coordinate in Y Axis	Same to that of X axis
D	Figure Width	When you select the single figure, the width of the selected figure

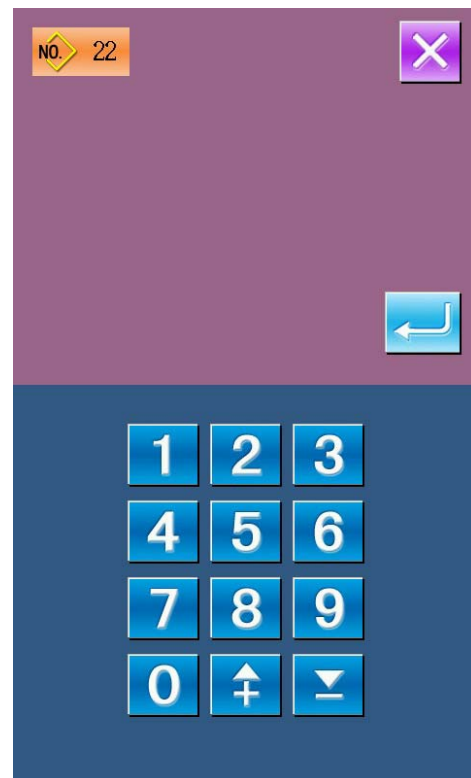
		will be displayed; when you select the entire figures, the width of the string will be displayed.
E	Figure Height	Same to Figure Width
F	Figure Position Adjustment	Adjust the position of the selected figure in directions (up, down, left & right).
G	Selection of Figure	Select the wanted figure. The selected is displayed in blue. When the selection still goes right after the last figure, the entire figures will be selected.
H	Adjustment of String Angle	Adjust the angle of the string which arrays horizontally or vertically, the rotation center is the origin.  Counterclockwise Rotation,  Clockwise Rotation
I	Adjustment of Figure Angle	Adjust the rotation angle of each selected figure, the rotation is perform with the middle point of the figure as its center  Counterclockwise Rotation,  Clockwise Rotation
J	Selection of Font	Change the font of the selected figures, the setting method is same to that of setting parameter.
K	Scaling in Height	Change the height of the selected figure, the setting method is same to that of setting parameter.
L	Scaling in Width	Change the width of the selected figure, the setting method is same to that of setting parameter.
M	Density of Satin	Change the satin density of the selected figure, the setting method is same to that of setting parameter
N	Adjustment of the string radian	Adjust the radian of the upper semi-circle or the down semi-circle.  Decrease Radian  Increase Radian

### 8.13.3 Save Letter Pattern

After adjustment, press  to have access to the interface for saving pattern (as shown in right). The system will set the unregistered pattern code automatically. User




















can also input the wanted figure by using 




























~  or  and .















































## 9 Appendix 1

### 9.1 Alarm Information List

Error No.	Display of Error	Name of Malfunction	Method for Release
EB001		Pedal is not at the middle position.	Self-recovery
EB002		Machine is in emergency stop	Press 
EB004		Main voltage is too low(300V)	Turn Off Machine
EB005		Main voltage is too high(300V)	Self-recovery
EB007		IPM is over-voltage or over-current	Turn Off Machine
EB008		Voltage of assistant device(24V) is too high	Turn Off Machine
EB009		Voltage of assistant device(24V) is too low	Turn Off Machine
EB013		Encoder is error or unconnected.	Turn Off Machine
EB014		Motor running abnormal	Turn Off Machine
EB015		Exceeds sewing area	Turn Off Machine
EB016		Needle bar upper position abnormal	Press 
EB017		Thread breakage detection error	Press 
EB018		Knife position abnormal	Turn Off Machine
EB019		Emergency switch is not at the right position	Self-recovery
EB020		Confirmation of tilt of machine head	Turn Off Machine
EB023		Thread-catching position abnormal	Turn Off Machine

Error No.	Display of Error	Name of Malfunction	Method for Release
EB024		Wrong connection between operation panel and sewing machine	Turn Off Machine
EB025		X origin detection abnormal	Turn Off Machine
EB026		Y origin detection abnormal	Turn Off Machine
EB027		Presser origin detection abnormal	Turn Off Machine
EB028		Thread-catching origin detection abnormal	Turn Off Machine
EB029		Intermediate presser origin detection abnormal	Turn Off Machine
EB030		Stepping driver communication abnormal	Turn Off Machine
EB031		Stepping motor over-current	Turn Off Machine
EB032		Stepping driver power supply abnormal	Turn Off Machine
EP301		Pattern not exist	Press 
EP302		Pattern file data error	Press 
EP303		Can't find pattern in memory	Press 
EP304		Can't delete existing pattern	Press 
EP305		Capacity of memory is too low.	Press 
EP306		Delete the last pattern	Press 
EP307		Pattern has existed	Press 
EP308		Pattern No. not exist	Press 
EP309		Can't find pattern data!	Press 

Error No.	Display of Error	Name of Malfunction	Method for Release
EP310		Memory is full	Press 
EP311		Parameter abnormal	Press 
EP312		Software update failure	Turn Off Machine
EP313		Forbid to input	Press 
EP314		Can't load updating file from U disk	Press 
EP315		File is too big	Press 
EP316		File load abnormal	Press 
EP317		File input abnormal	Press 
EP318		Initialization abnormal	Press 
EP319		Sewing counter is full	Press 
EP320		No. of pieces counter is full	Press 
EP321		Communication error	Turn Off Machine
EP322		Bad order	Turn Off Machine
EP323		Calculation over sewing area	Press 
EP324		Non-agreement of system version	Turn Off Machine
EP325		Calculation abnormal	Press 
EP336		Low battery	Press 
EP337		Needle position error	Press 

Error No.	Display of Error	Name of Malfunction	Method for Release
EP338		Over move range	Press 
EP339		Exceed largest needle pitch	Press 
EP340		Out presser is lifting	Press 
EP341		Fail to perform right operation	Press 
EP342		Exceed stitch number limitation	Press 
EP343		Can't select function	Press 

## 9.2 Prompt Information List

Information No.	Name of Information
M001	Prompt of Pattern Deletion
M002	Prompt of Inserting U Disk
M003	Can Not Found Pattern Data In U Disk
M004	Whether to copy entire patterns in U disk to operation panel?
M005	Whether to copy entire patterns in operation panel to U disk?
M006	Prompt of Turn-off Need
M007	Prompt of Over Set Range
M008	Prompt of All Sub-pattern Deletion
M009	Prompt of Restore Original Setting
M010	Prompt of Sub-pattern Deletion
M011	Prompt of Power-off after Successful Update
M012	Prompt of Needle Replacement
M013	Prompt of Cleaning Time
M014	Prompt of Oil Replacement
M015	Prompt of File Deletion
M016	Prompt of File Replacement
M017	Prompt of Clearing Value of Needle Replacement Counter
M018	Prompt of Clearing Value of Oil Replacement Counter
M019	Prompt of Clearing Value of Cleaning Time Counter
M020	Prompt of Clearing Value of Production Control Counter
M021	No Alarm Record
M022	Initialization of U Disk
M023	Confirmation of Point Transform
M024	Confirmation of Performance

<b>Information No.</b>	<b>Name of Information</b>
M025	Confirmation of auto-inserting for trimming
M026	Confirmation of Presser Movement
M027	Confirmation of Entry to Edition Interface
M028	Confirmation of Entry to Sewing Interface
M029	Confirmation of Change on Standard Zigzag Sewing
M030	Confirmation of Deletion on Mechanical Control Order
M031	Confirmation of Deletion on Shape Point
M032	Confirmation of Deletion on Needle Entry Point
M033	Confirmation of Deletion on Element
M034	Confirmation of Deletion on New Edited Pattern
M035	Number of Inputted Points over Limitation
M036	Number of Elements over Limitation
M037	Total Number of Inputted Point over Limitation
M038	Copy Parameter in U Disk to Operation Panel
M039	Copy Parameter in Operation Panel to U Disk
M040	Can't Find Data File in U Disk
M041	Data File is Found
M042	Prompt for power off after parameter recovery
M043	Prompt for power off after pattern recovery
M044	Prompt for inputting a letter at least



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## 10 Appendix 2

### 10.1 Installation Size of Control Box

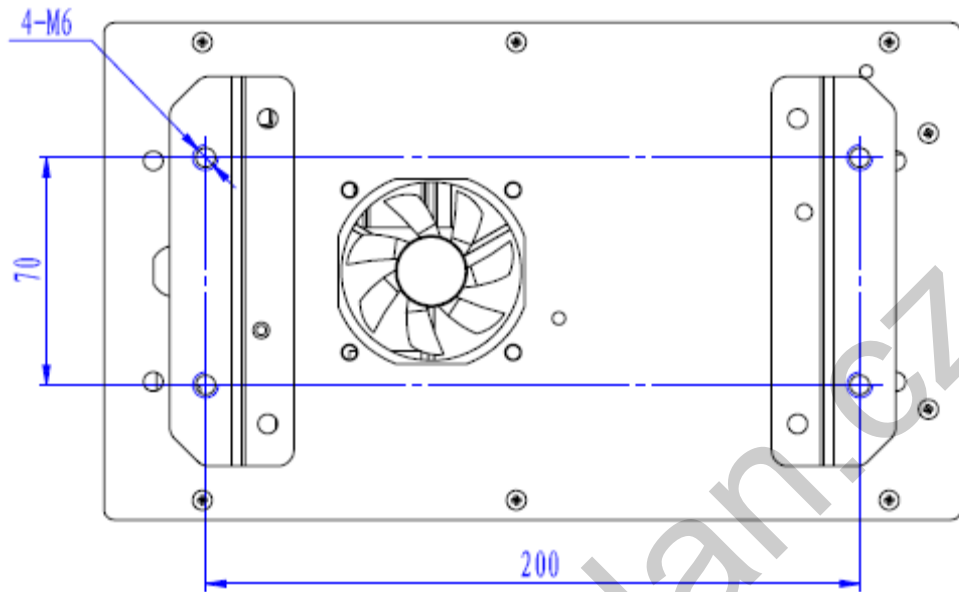


Figure 1 Size of 4-hole Installation

### 10.2 Installation Size of Operation Box

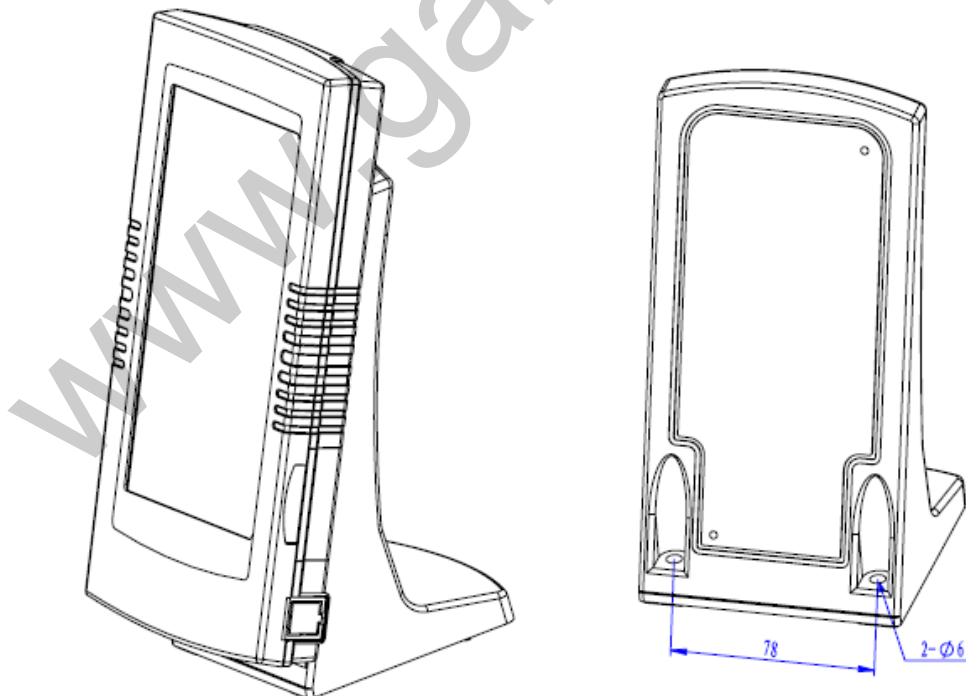
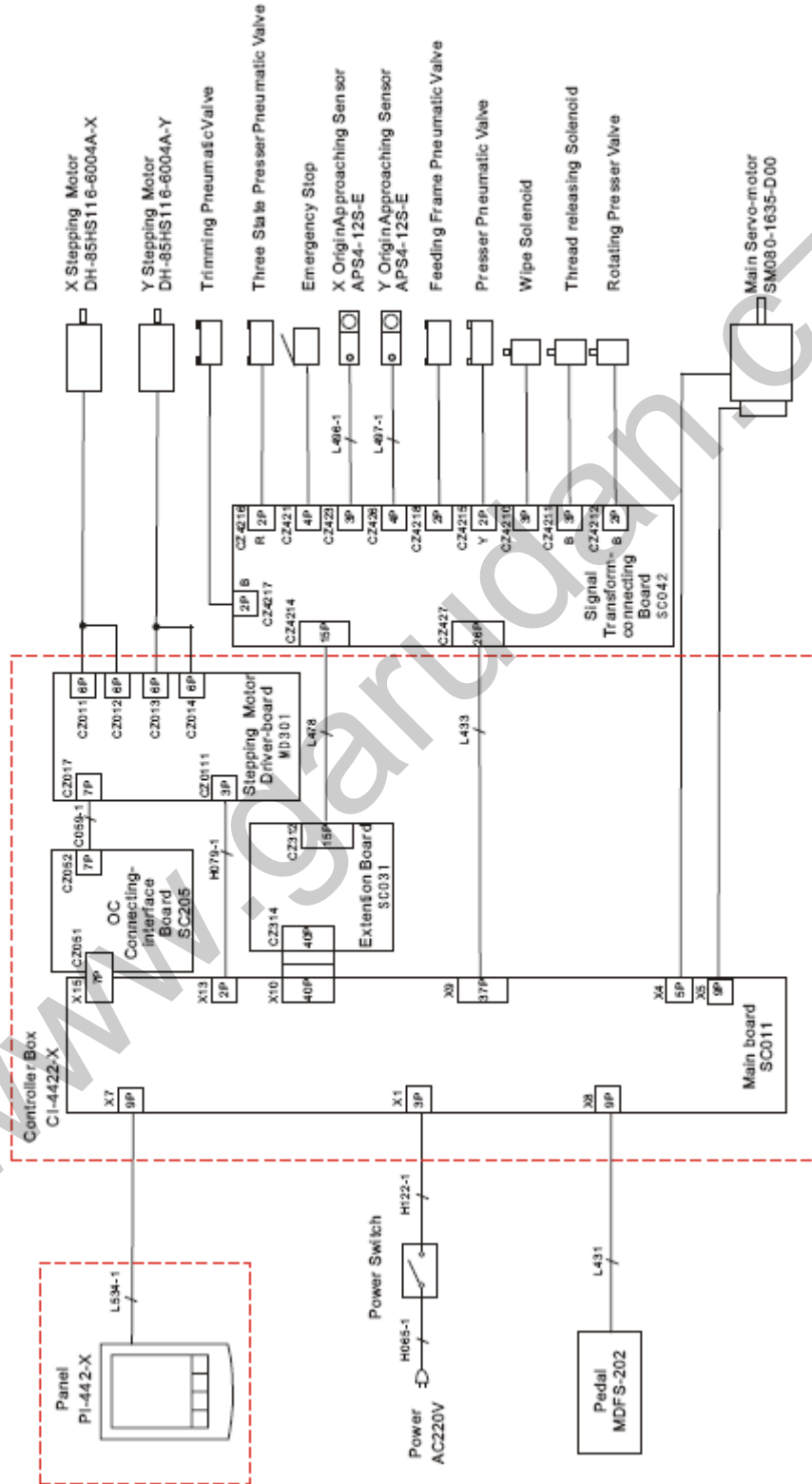


Figure 2 Installation Size of Operation Box

## 10.3 Control System Diagram & Cable Connection

### 10.3.1 Control System Diagram



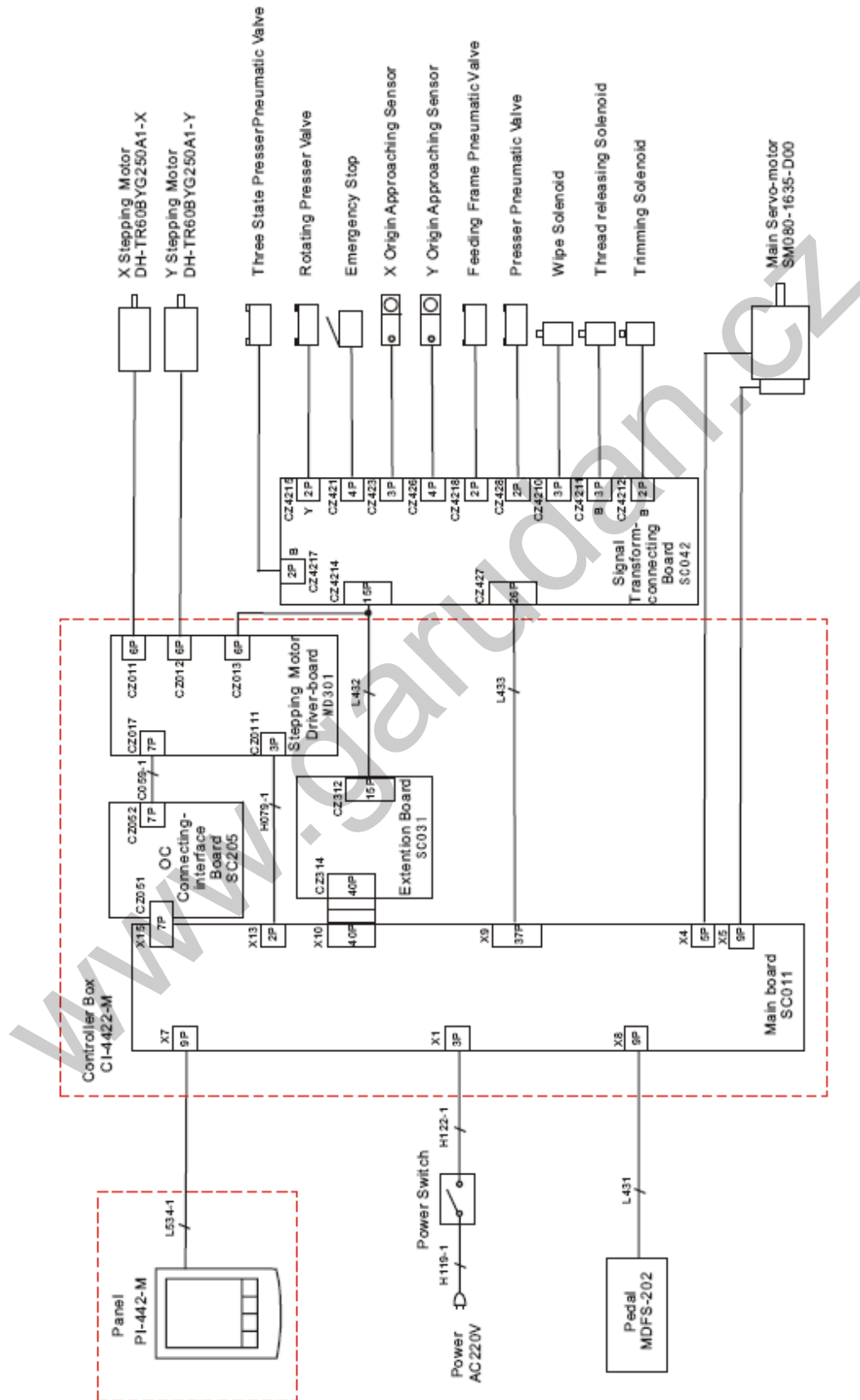
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### 10.3.2 Cable Connections Signal Transform-connecting

#### Board

Plug	Functions	Pin Definition
CZ4218(CZ429)	Feeding Frame Pneumatic Valve	1+, 2-
CZ4216	Three State Presser Pneumatic Valve	1+, 2-
CZ4217	Trimming Pneumatic Valve	1+, 2-
CZ4215	Presser Pneumatic Valve	1+, 2-
CZ4210	Wipe Solenoid	1, 3
CZ4211	Thread releasing Solenoid	1, 3
CZ4212	Rotating Presser Valve	1+, 2-
CZ421	Emergency Stop	3, 4
CZ423	X Origin Sensor	1, 2, 3
CZ426	Y Origin Sensor	1, 3, 4

### 10.3.3 1006 Control System Diagram



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### 10.3.4 Cable Connections of 1006 Signal

#### Transform-connecting Board

Plug	Functions	Pin Definition
CZ4218(CZ429)	Feeding Frame Pneumatic Valve	1+ , 2-
CZ4217	Three State Presser Pneumatic Valve	1+, 2-
CZ4215	Rotating Presser Valve	1+, 2-
CZ428	Presser Pneumatic Valve	1, 3
CZ4210	Wipe Solenoid	1, 3
CZ4211	Thread releasing Solenoid	1, 3
CZ4212	Trimming Solenoid	1+, 2
CZ421	Emergency Stop	3, 4
CZ423	X Origin Sensor	1, 2, 3
CZ426	Y Origin Sensor	1, 3, 4