



产品使用说明书 Manual book



JK-T1900G

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.

Safety Matters for Attention

3. Signs & Definitions of Safety Marks

This Operation 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:

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

4. Safety Matters for Attention

	Danger Danger	
	For opening the control box, please turn off the power and take away the plug	
A	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.	
Caution		
Usage Environment		
•	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 10% 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.	
Ω	Working temperature: $0^{\circ}C \sim 45^{\circ}C$.	
U	The operation of the sewing machine will be affacted by environment with	
	temperature beyond the above range.	
	Relative Humidity: 35%~85%(No dew inside the machine), or the operation of	
U	sewing machine will be affected.	

	The supply of compressed gas shall be over the consumption required by the	
U	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	
U	the socket. Because these will have influence on the operation of sewing machine.	
	Installation	
\wedge	Please ask the trained technicians to install the sewing machine.	
\bigcirc		
\wedge	Don't connect machine to power supply until the installation is finished.	
U	Otherwise the action of sewing machine may cause personal injury once the start	
	switch is pressed at that situation by mistake.	
A	When you tilt or erect the head of sewing machine, please use both of your hand in	
╱Ӛ∖	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.	
A	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	
U	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.	
•		
Sewing		
	Sewing	
\Diamond	Sewing This sewing machine can only be used by the trained staff.	
\bigcirc	Sewing This sewing machine can only be used by the trained staff. This sewing machine has no other usages but the sewing.	
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\wedge	Only can the trained technicians perform the repair, maintenance and inspection of	
S	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.	
A	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, use cut off the gas supply till the pressure indicator falls to 0.		
		A
be too careful to follow the entire Safety Matters for Attention.		
\wedge	If the sewing machine damages due to the unauthorized modification, our	
U	company will not be responsible for it.	

1 General Information

1.8 Technical Parameters of TSC20X/TASC20X

No.	TYPE ITEM	TSC20X/TASC20X
1	Purpose	Bartacking / Button Lockstitch
2	Sewing Area	X(lateral) direction 40 mm × Y(longitudinal) direction 30 mm
2	Max. Sewing Speed	Doubling & Tacking: 3200rpm
3		Button Sewing: 2700rpm
4	Stitch Length	0.1mm – 10.0mm (adjustable by 0.1mm)
5	Cloth Feed	Intermittent Feed(2-axis drive by pulse motor)
6	Needle Bar Stroke	45.7mm
7	Needle	DP ×5 #14 (DP×5 #11(F,M), (DP×17#21 thick cloth))
8	Type of Lifting Presser Foot	Driven by pulse motor
9	Height of Presser Foot	14mm (Standard), Max. 17mm
10	Total Number of Standard Patterns	100
11	Wiper Type	To work together with Presser Foot driven by Pulse Motor
12	Thread Catching Device	Standard : 0
13	Needle Thread Tension	Electrical Thread Tension Release
14	Shuttle	Standard Semi-rotary Hook or Semi-rotary Double Hook
15	Lubricating Method	Rotary Part: Lubricate with minimum amount
16	Lubricating Oil(Liquid)	Ordinary Sewing Machine Lubricating Oil (Liquid)
17	Grease	Ordinary Sewing Machine Grease
18	Data Memory	Flash Memory
19	Scaling Facility	20%~200%(by 1%) in X direction and Y direction respectively
20	Scaling Method	By increasing/decreasing the stitch length
21	Max. Sewing Speed Limitation	400-3200rpm (by 100rpm)
22	Pattern Selection	Specifying Pattern No. Type (1-200)
23	Bobbin Thread Counter	Up/Down Type (0 – 999999)
24	Sewing Machine Motor	500W Compact AC Servomotor (Direct Drive)
25	Dimensions	263mm×153mm×212mm
26	Weight	1.4Kg
27	Rated Power	770W
28	Operation Temperature Range	0°C - 45°C
29	OperationHumidityRange	35% - 85% (No Dew Condensation)
30	Line Voltage	AC 220V ± 10%; 50-60Hz

 \times Please reduce the max. sewing speed in accordance with the sewing conditions.

* Effective standard for product:QCYXDK0004—2016 "Computerized Control System for Industrial Sewing Machine"

1.9 Corresponding Machine Type

TSC20X/TASC20X electronic bar-tacking and button sewing machine

1.10 Input Mode

Use keys to input.

1.11 Display Method

Use black and white lattice LCD and LED to display all the information.

1.12 Panel Layout

The quadrate Panel can be divided into two parts, the display part and the operation part. The display part consists of 1 lattice LCD and 2 LEDs and the operation part consists of 24 keys. Refer to the picture of the panel.

1.13 Standardization

The function keys use standard images recognizable and popular within the industry. Image is an international language that can be understood by any nation.

1.14 Operation Mode

Function keys include READY key, RESET key, MODE key, THREADING/WINDING key, SELECTION key, UP/DOWN key, EDIT key, RETURN key and other keys for special functions. See operation instruction for detailed operating methods.

2 Operation and Debugging

2.1 Instructions of Operation Panel



A. LCD

Display pattern number, shape and various other data.

B. READY Key

This key changes from the setting state of the panel to the sewing state where the sewing machine actually operates.

C. RESET Key

D. This key is used for canceling error or returning the set value to the initial value.

E. MODE Key

This key initiates the setting of parameters or stored patterns.

F. PRESSER FOOT/WINDING Key

This key is used to lift or lower the presser foot. When presser foot is up, move the needle bar back to origin; when the presser foot is down, move the needle bar to the right. Press this key when winding.

G. SELECTION Key

This key is used to select among various pattern types, menu items or parameters.

H. DATA SETTING Key

This key is used to modify the pattern number or parameter value. Under trial sewing mode, this key is used to move single needle and feed cloth.

I. EDIT Key

This key is used to display editing interface, select item or display detailed information.

J. RETURN Key

This key is used to return to the previous interface.

K. Sewing Ready LED

LED is on under sewing mode.

L. C Pattern Setting Key

Set and save C patterns, and press this button to start sewing the saved C pattern.

M. Presser Foot Origin Key

When LED is off, lower down the presser foot and find origin of XY stepping.

N. C Pattern Shift/Single-step Sewing

When LED is off, enter P/C pattern list; after LED is on, lower down the presser foot and find origin of XY stepping.

2.2 Installing the Main Shaft Motor



2.3 Text Mode

This mode is activated to conduct maintenance operation.

key to enter the item for test. The

 When the sewing LED is off, hold pressing key for 3 seconds, and you would hear the ring of the buzzer. Then 	
select item "11 system test" by pressing key and press key to enter test mode.	M SEL:▲▼ <u>11 System check</u> 12 Sys K param 13 Reset default 14 Password setting
	P1 P2 P3 P4 P5 P6 P7 C1 C2 C3

2) Press 💽 key to change the function item for test and press 🚄 functions represented by each number are as follows:

Function Test Item	Function	Description
01 System Input Test	Input signal test	LED light as the indicator to show the status of
		sensor input
02 XY Origin Adjustment	XY motor/origin sensor test	Display inching operation, origin searching
		operation and the status of X/Y origin sensor
		of X/Y motor
03 Aging Mode	Continuous running	Change to continuous running mode after
		setting the conditions of continuous running
04 Main Shaft Test	Main motor rotation number test	Set up the rotation number, start machine and
		display the actual rotation number.
06 Presser Foot Motor Test	Presser foot, thread-trimming	Display inching operation of presser foot and
	motor/origin sensor test	thread-trimming motor, origin searching
		operation and the status of presser foot
		origin/presser foot sensor.
08 System Output Test	Output signal test	Drive the movement of output solenoid/air
		valve.
09 Panel Test	LED and LCD test	Test the status of panel displayer and LED
		light.

3) During the function test, if user presses key or key, the test will be terminated and the

system will return to the status of step 2); however, if the aging mode has been used once, the aging mode can't be released unless the power supply is shut off.

2.3.1 01 System Input Test



2.3.2 02 XY Origin Adjustment

This function is to display the inching operation, origin searching operation and the status of X/Y origin sensor of X/Y motor.



2.3.3 03 Aging Mode

After selecting "03 aging mode", press key to enter continuous running mode. After setting its

()

conditions, activate the continuous running mode; turn off the power to release the continuous running mode.



ON: valid (origin search at each sewing end)

key to save and enter the main interface of normal sewing mode.

After setting, press3) Continuous Operation

Under sewing mode of normal patterns, user can set pattern No., X/Y scale rate, max. rotation speed and other conditions before starting sewing. At sewing end, if the origin search is set to be valid in step 2, the system will conduct the origin search of X/Y presser foot and thread-catching/trimming motors. After the set interval

time, the system will automatically start sewing again. If user need stop continuous sewing, press key at sewing end to pause and turn off the power to terminate the continuous sewing.

2.3.4 04 Main Shaft Detection

Set the rotation speed of the machine, and then drive the main motor of the machine to display the actual rotation speed under the set rotation speed.

1) Preparation	Jack
Select "04 main shaft detection" and then press	M // O
key to enter. Each motor will automatically execute	
origin research. The screen will display the "target	04 +
rotation speed", "actual rotation speed" and "main shaft	Set speed 400 Act speed 0
angle" of the main shaft motor.	Angle 53
	<u>ت</u> -
	₽/с/-₩ []/
	[P1] [P2] [P3] [P4] [P5]
2) Operation	
Press 🤄 key to change the target rotation speed of the main	shaft, and then press key to operate the
	(\pm)
machine at the set rotation speed. If the set rotation speed need	abancing user can continue pressing
machine at the set rotation speed. If the set rotation speed need of	key
during the operation to set the rotation speed and then press \Box	• key again to operate the machine at the new
set rotation speed. Press key to stop the machine. After	er machine stops, press key or
key to quit.	

2.3.5 06 Presser Foot Motor Detection

This function can be used to display the inching operation, origin search operation of the presser foot/thread-trimming motors and the status of presser foot origin sensor and thread-trimming sensor.

IACK
M // O
06 $1 + 1 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 +$



2.3.6 08 System Output Test



2.3. 09 Panel Test

Under this test, press key to light up all LED lights on the panel and the full screen of LCD, and press

key to return to normal display status.

2.4 Basic Operations

2.4.1 Pattern Number Setting

Open power swtich.	Jack
On the left upper side of the screen will be displayed the pattern	
No., as well as pattern shape, X/Y scale rate, thread tension and	
sewing speed.	
Press $\overset{\textcircled{+}}{\bigcirc}$ key to change pattern No. and press $\overset{\textcircled{+}}{\bigcirc}$ key to shift	01 ⁺ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
pattern mode, that is, memory pattern, P pattern and C cyclic	¢41 <u></u> ≩2500
pattern.	
	P1 P2 P3 P4 P5
	[P6] [P7] [C1] [C2] [C3]

2.4.2 Item Data Setting

key and the item data input interface will be displayed. Press

On the left side is the item to be edited and on the right side is the content of setting.



key to change the content and press

to save and return.



(3) Sewing Speed Input	
Press key to display C004 sewing speed.	C004 2500 Sew speed つ ▼ -
The inputted value is limited by the max. sewing speed set by parameter U001.	
	(F6) (F7) (C1) (C3)

(4) Setting Completion

C Press key.

Presser foot moves and lifts and sewing LED lights up to enter sewing status.

Note: press READY key and the presser foot will return to the sewing start. The presser foot will lower down before moving. Therefore, please watch your fingers.

* Press key to save the set value of pattern No., XY scale rate, etc.
* Press key again, and sewing LED will be off. At that time, user can change the setting of each item.
* Please confirm the pattern No. first. Otherwise, press key will initiate error M-306. At that time, user
need reset the pattern No.

C key, the set value of pattern No., XY scale rate, max. Note: if user turns off power before pressing rotation speed and thread tension will not be saved.

2.4.3 Pattern Shape Confirmation

Warning!

1. After selecting the pattern, user must confirm the pattern shape. If the pattern shape is away from the presser foot, the needle may collide with the presser foot and break.

2. When confirming the pattern shape, please note that if user press +/- keys when the needle bar is down, the needle bar will lift automatically before the presser foot moves.



2.4.4 Sewing

Sewing:

- 1. Put sewing material under presser foot.
- 2. Step pedal to level 1 to lower the presser foot and release the pedal to lift the presser foot.
- 3. Step pedal to level 2 to start sewing.
- 4. At sewing end, presser foot will lift and return to sewing start.



2.4.5 Change to Other Pattern



2.4.6 Bobbin Thread Winding





2.4.7 Sewing with Counter

(1) Counter Setting Method

1)	Enter counter setting interface	Jack
	Under input mode, when sewing LED is off, press	M // U
	key to display the mode interface.	
	Press key to select "02 counter setting".	M SEL:▲▼ 01 Sys U param 02 Sew counter 03 Normal pat lock 04 Reg P pat
	When counter interface A is displayed, counter can be set	
	under input mode. If the system is under sewing mode, press	
	key to turn off the sewing LED.	
2)	Select counter type	
	Press key to shadow the counter type icon B. Press	P1 P2 P3 P4 P5 P6 P7 C1 C2 C3



3) Change counter value



(2) Counter Type

₩². **†**B01 Sewing Plus Counter

The present value will add 1 after sewing 1 shape.

Present value and set value.

₩23.↓ B02 Sewing Minus Counter

The present value will deduce 1 after sewing 1 shape.

When present value reaches 0, minus counter interface will be displayed.

WetB03 Piece Number Plus Counter

Calculate present value of 1 cyclic sewing by adding number. When present value equals with set value, counter interface will be displayed.

B04 Piece Number Minus Counter

Calculate present value of 1 cyclic sewing by deducing number. When present value reaches 0, counter interface will be displayed.

■^{123.}**†**B05 Bobbin Thread Plus Counter

Add to the present value after every 10 stitches. When present value equals set value, counter interface will be displayed.

■ B06 Bobbin Thread Minus Counter

Deduce the present value after every 10 stitches. When present value reaches 0, counter interface will be displayed. We B07 Counter Nonuse

(3) Counter Release

When the counter value is exhausted, counter interface will be displayed. Press key to reset the counter and then the counter will start	
Press key to reset the counter and then the counter will start counting again.	Image: A transmission of the second seco

2.4.8 Pause

(1) Emergency Stop by Pedal

Pedal has three levels: level 1 to lower the presser foot, level 2 to start sewing and level 3 (to step backward with heel) for emergency stop.

- Press the READY key and then step forward ↓ the pedal to lower the presser foot;
- 2) Step forward \clubsuit the pedal again to start sewing;
- During sewing, user can step backward ↓ the pedal to stop the machine emergently and the panel will display "E-002".



(2) Emergency Stop by Panel

1)	Use parameter U031 to set the RESET key as 1 and the RESET key will be changed into pause key to stop the machine during sewing.	Jack M // U
2)	Press to stop the machine and "E-002" will be displayed. Press key again to release the error and the interface to feed cloth forward/backward will be displayed.	
		[34] [34] [35] [35] [35] [15] [76]

- 3) Then, 3 operations are available:
- 1. Use starting switch to start sewing.



4.After pressing RESET key to trim thread, user can step the pedal again to continue sewing.

2.5 P Pattern and C Pattern Setting

2.5.1 Use Pattern Key to Sew

User can register patterns (No.1~200) to P1~P99. Patterns can be registered after changing scale rate, max. rotation speed, thread tension and sewing position. User can also use pattern No. rolling window to register pattern. P1~P25 can be displayed at the same time.

* When selecting P6~P25, user can use the combination of P1 P2 P3 P4 P5 keys (press simultaneously) to sew.

P-No.	Selection Key						
P1	P1	P8	P1+P4	P15	P4 +P5	P22	P2+P3+P4
P2	P2	Р9	P1+P5	P16	P1+P2+P3	P23	P2+P3+P5
P3	P3	P10	P2+P3	P17	P1+P2+P4	P24	P2+P4+P5
P4	P4	P11	P2+P4	P18	P1+P2+P5	P25	P3+P4+P5
P5	P5	P12	P2+P5	P19	P1+P3+P4		
P6	P1+P2	P13	P3+P4	P20	P1+P3+P5		
P7	P1+P3	P14	P3+P5	P21	P1+P4+P5		

(1) Register to Pattern Key

Example: register pattern No.3 to P2, with X scale rate as 50%, max. speed of 2000sti/min, thread tension as 50 and pattern position as 0.5mm to the right and 1mm forward.

1)	Turn on the power and then press key. (Sewing LED	
	is off.) Enter mode setting (memory switch setting). Press key to select "04 register P pattern" and press key to enter pattern register mode.	M SEL:▲▼ 01 Sys U param 02 Sew counter 03 Normal pat lock 04 Reg P pat

-		
2) 3)	Press key and then press the standard pattern as No.3. Press to set P-No. as 2. Press READY key to register P2 and the mode interface will be displayed. Then press key or key.	
4)	Set separately the X scale rate as 50%, Y scale rate as 80%,	
	sewing speed as 2000 sti/min and thread tension as 50.	
	5) Press key and X scale rate will be displayed as 0.0.	
	the increment of X direction movement can be set as 0.1mm.	Jack
	Press key to change the data into 0.5 .	
0		A ↑ V23↑ 0 PO2 × 100%
6)	press key and X scale rate will be displayed as 0.0. The increment of X direction movement can be set as 0.1mm. Press	
		\$ 41 ≜ 2500
	key to change the data into 1.0.	
7)	Press key to complete setting.	
8)	Press key to complete pattern registering method.	
9)	Press key to complete setting and return to normal	
	mode.	

2.5.2 Group Sewing (Cyclic Sewing)

This machine can be used to sew several patterns in order cyclically.

Up to 99 patterns can be inputted. In addition, 99 data of group sewing can be registered. If necessary, please make a copy for future use.

(1) Cyclic Data Selection

1)	Set as input mode	Jack
	Under input mode, when sewing LED is off, select cyclic	
	sewing data. If the system is under sewing mode, press	
	key to change into input mode. The cyclic sewing data can only be selected under data mode.	
2)	Select cyclic sewing data	

Press key to shift among the registered cyclic sewing data No. and continuous sewing data No. At this time, user can select the intended cyclic sewing No.

3) Conduct sewing

After selecting the continuous sewing data, press key and sewing LED lights up, ready for sewing.
Only cyclic data No.1 is registered without sewing patterns and therefore cannot be used for sewing. Please
follow the following editing method to input patterns.

(2) Cyclic Sewing Data Editing Method

1)	Set as input mode	Jack
	Under input mode, when sewing LED is off, user can input	
	continuous sewing data. If the machine is under sewing	
	mode, press key to change into input mode.	→ <u>\</u>
2)	Set cyclic sewing data as editing status	188+ P08+P381
		50/00 1998 1988 1958
	Press key to enter editing status and the selected	
	pattern No. for editing will become shadowed. At that time,	
	data can be edited.	
		[P1] [P2] [P3] [P4] [P5]
3)	Select editing content	
	Press key to change the editing content and when mov	e to the last pattern, user can add patterns
	ress rey to change the containg content and when mov	e to the fast partern, user can add parterns.
	After selecting the editing content, press key to disp	lay the icon b which means pattern data can be
	inserted.	
4)	Change data of editing content	
	Press (b) key to change data of the editing content.	
	The registered pattern No. will be displayed for editing.	
	Press key to delete the pattern data. User can repe	at steps 3 and 4 to edit data.
5)	Cancel pattern data input	
	Press key to cancel pattern data input and return to	input mode.

(3) Sewing Operation



2.6 Copy/Delete P Pattern and C Pattern

Registered P patterns can be copied into new P patterns, so are C patterns. Existing P patterns or C patterns can also be deleted (the last C pattern cannot be deleted).

2.6.1 Copy/Delete P Pattern

1)	When sewing LED is off, press key to enter system	
	menu, press key to select "05 copy/delete P pattern" and then press key to enter this mode.	M SEL:▲▼ OS Copy/del P pat O6 Reg/del C pat O7 LCD contrast O8 Software ver

2) Press key to shift to the P pattern number(existing) to be copied, and press to shift to a new P pattern number (new). After confirmation, press key to save and return.Press key to quit saving and return.	
 3) When pressing 3) When pressing (and if user press) (at that time, the existing P pattern will be deleted. 	

2.6.2 Copy/Delect C Pattern



2.7 Memory Switch Activation and Change

1)	Set input mode	Jack
	When sewing LED is off, memory switch data can be changed.	
	Under sewing mode, press \Box key to shift to input mode.	
2)	Enter data editing interface	M SEL:AV
	Press N key to display the mode interface (operator	01 Sys U param 02 Sew counter 03 Normal pat lock
	level).	04 Reg P pat
	Press key to select "01 U parameter" and press	
	key to enter memory switch data interface.	
		[P1] [P2] [P3] [P4] [P5]
		[P6] [P7] [C1] [C2] [C3]

Press key to select the data item to be changed. 4) Change data Press key to increase or decrease the set value. 5) Save and quit After completing data change, press key to save and quit, and return to mode interface. Press key again to return to sewing interface.	3)	Select data to be changed	Jack
 4) Change data Press key to increase or decrease the set value. 5) Save and quit After completing data change, press key to save and quit, and return to mode interface. Press key again to return to sewing interface. 		Press key to select the data item to be changed.	
5) Save and quit After completing data change, press key to save and quit, and return to mode interface. Press key again to return to sewing interface. Fill Prove to save and Prove to save to save to save and Prove to save to s	4)	Change data Press key to increase or decrease the set value.	Maximum sew speed ≞
	5)	Save and quit After completing data change, press key to save and quit, and return to mode interface. Press key again to return to sewing interface.	

2.7.1 User Parameter Setting List

No.	Function	Adjustment Rang	Default Value
U001	Max Speed of Sewing (it can be set by an increment of 100rpm)	400~3000	3000
U002	Sewing speed of 1 st Stitch (thread-catching) (It can be set by an increment of 100rpm)	400~1500	1500
U003	Sewing speed of 2 nd Stitch (thread-catching) (It can be set by an increment of 100rpm)	400~3000	3000
U004	Sewing speed of 3 rd Stitch (thread-catching) (It can be set by an increment of 100rpm)	400~3000	3000
U005	Sewing speed of 4 th Stitch (thread-catching) (It can be set by an increment of 100rpm)	400~3000	3000
U006	Sewing speed of 5 th Stitch (thread-catching) (It can be set by an increment of 100rpm)	400~3000	3000
U007	Thread tension of 1 st Stitch (thread-catching)	0~200	200
U008	Thread tension at the time of thread-trimming	0~200	0
U009	Changeover time of thread tension at thread-trimming	-6~4	0
U010	Sewing speed of 1 st Stitch (no thread-catching) (It can be set by an increment of 100rpm)	400~1500	400
U011	Sewing speed of 2 nd Stitch (no thread-catching)	400~3000	900

No.	Function	Adjustment Rang	Default Value
	(It can be set by an increment of 100rpm)		
11012	Sewing speed of 3 rd Stitch (no thread-catching)	400~3000	3000
0012	(It can be set by an increment of 100rpm)	400 - 5000	3000
U013	Sewing speed of 4 th Stitch (no thread-catching)	400~3000	3000
	(It can be set by an increment of 100rpm)		
U014	Sewing speed of 5 th Stitch (no thread-catching)	400~3000	3000
	(It can be set by an increment of 100rpm)		
U015	Thread tension of 1 st Stitch (no thread-catching)	0~200	0
11016	Changeover timing of thread tension at the sewing start	-5~2	0
U016	(no thread-catching)	J Z	0
U025	Presser Foot Division	0: Divided	1
		1: Not divided	-
U026	Adjustment of presser foot height in section level 2	50~90	70
11020	The unice switch	0: close	1
0030	The voice switch	1: open	1
	Use keyboard (Clear Key) to stop sewing machine	0: invalid	
U031		1: RESET key	0
		2: External emergency stop	
		0: no voice	
U032	Buzzer forbidden	1: panel operation voice	2
		2: panel operation voice and alarm voice	
U033	Set number of stitches that thread-catching releases	$1{\sim}7$ stitches	2
U034	Time deferrable in catching thread	$-20 \sim 0$	0
11025		0: Normal	1
U035	Forbid the control on catching upper thread	1: Forbidden	1
	Select the Feed time.		
U036	When stitches are not well tightened, set the value in	-8~16	12
	"-" direction.		
	7 Presser foot status at sewing end	0: Back to sewing start and then lift	
		1: Back to sewing start and at the same	
U037		time lift	1
		2: lift the presser foot manually by	
		stepping the pedal	
U038	When the presser foot doesn't lift, sewing can only be	0: Normal	0
	done by starting switch	1: Forbidden to lift presser foot	
U039	Search origin at sewing end	0: Not search origin	0
		1: Search Origin	
U040	Search origin at cyclic sewing	0: Not Search origin	0

No.	Function	Adjustment Rang	Default Value
		1: Search origin after the finish of each	
		pattern	
110/1		0: Not search origin	0
0041	Search origin at sewing of 1 pattern	1: Search Origin	0
11042	Stop position of poollo har	0: upper position	0
U042	Stop position of needle bar	1: highest position	0
110.42	Brightness of LED spotlight at the machine head	0~10	5
U043		The larger value, the brighter; 0 means off.	
		0: normal	
U046	Forbid thread-trimming	1: forbid thread-trimming	0
U049	Set winding speed	800~2000	1600
		0: start bar tacking	-
0055	Forbid start bar tacking at button sewing	1: no start bar tacking	0
	Setting method of X/Y scale rate	0: by percentage	
U063		1: by size	0
		0: stand-by at the sewing start	0
U135	Presser foot movement order before sewing	1: stand-by at the origin	
U200	Language	Set language	Simplified Chinese
		0: lower at the same time	
		1: lower left presser first and then right	
U212	Air valve separate presser foot lowering order	presser	0
		2: lower right presser first and then left	
		presser	
		0: lift at the same time	
	Air valve separate presser lifting order	1: lift left presser foot first and then right	
U213		presser foot	0
		2: lift right presser foot first and then left	
		presser foot	
U214	Overturn Presser Foot Availability	0: forbidden	1
		1: available	_
			Display the
U245	Clear lubricating alarm error	Press RESET to clear	accumulated number
			of sewn stitches

3 Service Parameter Setting

Service parameters are different from normal parameters and usually are not allowed to change by users. These parameters are for technicians to debug the machine.

3.1 Service Parameter Activation and Change

When sewing LED is off, hold pressing key for 3 seconds until the buzzer rings so as to activate and change the service parameter.

The operation of service parameter change is the same with that of normal parameter, please refer to [2.7 memory switch activation and change].

3.2 Service Parameter List

No.	Function	Adjustment Range	Default Value	
	Pedal Type	0: Analog Single Pedal		
		1: Digital Single Pedal		
K001		2: Double Pedals	0	
		3: Double Pedals, but only the operation		
		pedal controls		
		0: no control	0	
K002	Intermediate Dresser Fact Control Method	1: not used		
K002	intermediate Presser Poor Control Method	2: solenoid control		
		3: mechanical control		
K019	Lifting time of pneumatic outer presser foot	0~90	30	
K021	Positions of standard pedal & pedal switch	50~200	70	
K022	Position of standard pedal & stroke switch of high/low section.	50~200	120	
K023	Position of standard pedal & start switch	50~200	185	
K027	Dropping speed of presser foot at depressing pedal	100~4000pps	4000	
K028	Lifting speed of presser foot at stepping pedal	100~4000pps	1500	
K029	Lifting speed of thread-trimming presser foot at sewing end	100~4000pps	3000	
K043	Selection of machine rotating number at thread-trimming	3~8	8	
K 044	Selection on whether to feed cloth in the direction for easy thread-trimming	0: Not Feed	0	
N 044		1: Feed		
K045	Guide diameter of needle hole for feeding cloth at thread-trimming (by an increment of 0.2mm)	16~40 (1.6mm~4.0mm)	16	
No.	Function	Adjustment Range	Default Value	
--------------	--	---	---------------	--
K056	Limited range of motion in +X direction (Right)	0~50mm	20	
K057	Limited range of motion in -X direction (Left)	of motion in -X direction (Left) 0~50mm		
K058	Limited range of motion in +Y direction (Back)	0~30mm	15	
K059	Limited range of motion in -Y direction (Front)	0~30mm	15	
W0C4		0: solenoid	1	
K064	Select thread wiping method	1: motor	1	
K066	Impulse number for coactions of presser foot and wiper	30~60	45	
K074	Prosser fact control mode shift	0: air valve control	1	
K 074	riesser foot control mode sinft	1: motor control	1	
K095	Thread-trimming angle	-10~10	0	
K007	Thread trimming method at pause	0: automatic thread-trimming	1	
K097	Thread-uninning method at pause	1: manual thread-trimming	1	
K102	X stanning motor full current parameter	0~15	7	
K102		Effective after restart	7	
K104	Y stepping motor full-current parameter	0~15	11	
		Effective after restart		
K106	Thread-catching stepping motor full-current parameter	0~15	2	
		Effective after restart		
K108	Presser stepping motor full-current parameter	0~15	14	
		Effective after restart		
K109	X stepping motor semi-current parameter	0~15	7	
		Effective after restart		
K110	Y stepping motor semi-current parameter	$0 \sim 15$	6	
		enective after restart		
K111	Presser foot stepping motor semi-current parameter	0^{\sim} 15	5	
K112	Main shaft stop correction	$-10 \sim 10$	0	
KIIZ		3000~12000	0	
K120	Stitch number for alarm to add lubricating oil	Unit: ten thousand stitches	5000	
		0: Clear and Plus/Minus:		
		1: Clear Only:		
K121	Counter Lock	2: Plus/Minus Only:	0	
		3: Neither Clear nor Plus/Minus		
K122	OC length adjustment	$-128 \sim 128$	0	
K123	OD length adjustment	-128~128	0	
K124	BD length adjustment	-512~512	0	
K125	OC length	1780~2380	2080	
K126	OD length	1440~2040	1740	
K127	BD length	430~630	530	

No.	Function	Adjustment Range	Default Value	
		0: DSP1 Close DSP2 Close		
		1: DSP1 Open DSP2 Open		
K128	Stepping Drive Type	2: DSP1 Close DSP2 Open		
		3: DSP1 Open DSP2 Open		
		Effective after restart		
K135	Thread-separating delay	$-10 \sim 30$	0	
K137	Thread clamp release angle at sewing start	-150~150	0	
		-2~1		
K138	I nread clamp holding time after trimming at sewing	-2 means thread holding action prohibited	0	
	start	after thread-trimming at sewing start		
		0: electronic	_	
K140	Thread Tension Control Method	1: mechanical	0	
	Suction force adjustment of branch thread tension		-	
K141	solenoid	$-20\sim20$	0	
W1 40	Holding force adjustment of branch thread tension	4040	0	
K142	solenoid	$-40 \sim 40$	0	
	Invalidity of head tilt safety switch	0: Normal		
K150		1. The safety status of tilt head is invalid	0	
		1. The safety status of the near is invalid.		
K160	Prohibit stepping the pedal backward for emergency stop	0~1		
		0:Allowed	0	
		1:Prohibited		
		0 ~ 1		
K168	Medium pressure foot action mode	0: pedal 1 medium pressure foot down	1	
		Step 1: step 1 medium pressure foot lift		
		0~10		
	Set stitch number for thread breakage detection	Value bigger than 0 means the stitch		
K172		number after thread breakage before	0	
		emergency stop		
		0 means thread breakage detection is off.		
		0: forbidden		
K174	Sensor availability at the cutter position	1: in use	1	
K227		0: 0830-F11		
	Main Shaft Motor Type	1: 0830-F01	0	
		Effective after restart		
		0: Bar-tacking		
K241	Function Selection	5: Pattern bar-tacking	0	
		7: Button sewing		
		0 ~ 255		
K242	Extended model ID	Set extended model function	0	

Note: the above parameters are for the use of repairers only and user should not change them without caution.

3.3 Restore Default Setting

If the user changes some parameters by mistake, which are properly set at delivery, the function of "recovery to default setting" can be used to restore the system.

At recovering the default settings, the entire parameters that are set by user before will be covered. Therefore, please take caution in using this function. If necessary, please contact the technicians of the manufacturer, and operate the machine with the instruction from the professionals.

The specific operation procedure is as follows:

When the sewing LED is off, hold pressing \bowtie key for 3 seconds until the panel buzzer rings. Press key to select "13 recovery to default setting", and then press key to enter the menu for restoring

default setting. Press *key* again to select the item to be restored and then press *key* to execute the recovery operation. The panel will hint "executing, please do not turn off the machine", which means the recovery operation is undergoing and the power supply shall not be shut down. When the operation is completed, the penal will hint "please turn off the machine" and then you can shut down the machine and restart it to restore the default setting.

Note: During the restoring process, if the power supply is shut down by accident, the restoring process has to be aborted and you failed to restore the default setting. The software will return to the former state before restoring.

3.4 Software Version Display

When sewing LED is off, hold pressing key for 3 seconds until the buzzer sings. Release key and then press key to select "08 inquire software version". Press key to enter the software version inquiry interface, where user can press key or key to select the version to be inquired. The software version will be displayed in the following order: Main control: machine type-MC-manufacturer code-version number Operation panel: machine type- LKD2-manufacturer code-version number Stepping 1: machine type- MD1-manufacturer code-version number Stepping 2: machine type- MD2-manufacturer code-version number

3.5 Check Total Number of Stitches and Clear Lubricating Alarm

After the machine runs for a period of time, the system may hint "M-333 machine needs lubricating", which means lubricating is needed. Under this situtation, press key first to clear the lubricating alarm, and then press to enter system menu. Select "01 system U parameter" and press key to enter U parameter setting mode. Then press key to select "U245 clear stitich number for lubricating" and press to clear the total number of stitches, to stop displaying the same message.

3.6 Password Setting and U/K Parameter Lock

The system provides users with password management function for them to set password by themselves. After inputting the set password, user can unlock certain advanced functions. User can lock system parameters to prevent change of key parameters by mistake so as not to cause problems.

3.6.1 Change Password

If user need change password, first enter password management mode and then change the password by the

following method: when sewing LED is off, hold pressing key for 3 seconds until the buzzer rings, press

key to select "14 password setting" and press key to enter password input interface.

Press key to move backward or forward to delete the password	Jack M // O
position to be inputted. Press key to input the password	PASSWORD 01
character for the selected position. The available password characters are "0~9", "A~Z". After completing input, press to confirm	*****
and enter the new password input interface. Otherwise, the system will report error and return to the system menu. Note: the default password is fixed; for more information, please	
contact your machine manufacturer or its agents.	
	P1 P2 P3 P4 P5 P6 P7 C1 C2 C3



3.6.2 Set U/K Parameter Lock

This function allows user to lock or unlock parameters that need protecting. Every U parameter and K parameter can be set to be locked or unlocked. The setting method is the same for U parameter and K parameter, and here take U parameter lock for example.

Under the system menu, press key to select "15 U	J parameter lock" and press key to enter
password input interface. Input the right password and press interface. The password has to be correct, otherwise user cannot	s key to enter U parameter lock setting

Under this interface, press key to select the U parameter that need change its locked/unlocked status, and press to change the locked/unlocked status. The symbol remeans locked and remeans unlocked. When parameter is locked, user need input password to change its set value. When user quit the parameter setting interface and enter it again, the locked parameters will remain locked.	M// O UOOI Maximum sew speed - P/C/ Fi Fi Fi Fi Fi Fi Fi Fi C1 C2 C3
After completing the parameter lock setting, press key o	or key to save and quit.

4 Button Sewing Function

4.1 Button Sewing Function Setting

1、 When sewing LED is off, hold pressing M key for 3 seconds until the buzzer rings, and release M	
 key to activate service parameter medication; 2. Press key to select "12 system K parameter", press 	「K241」 Machine type 合
key to enter and then press key to select parameter K241;	

3 Press

key to change the parameter value into "7" and press

♪ ke

key to confirm the change. At this

time, the panel will hint "operation executing, please do not turn off the machine", and user must not cut off the power supply. When the panel hint "please turn off the machine" after a while, user can cut off the power supply.

4. Then power the machine again and the function changes into button sewing.

Note: the button sewing function of the machine requires special presser foot and other auxiliary external devices. For more information, please contact your machine manufacturer or its agents.

No. Pattern Thread Standard Sewing No. Pattern Thread Standard Sewing Numbe Length X(mm) Numb Length X(mm) r er 2 1 18 3.6x3.8 22 3.6x3.8 26 3.6x3.8 4 30 3.6x3.8 3 5 24 3.8x3.9 6 26 3.5x3.8 7 30 3.5x3.8 8 34 3.5x3.8 19 9 4x4 10 22 3.7x3.9 11 26 3.7x3.9 12 18 3.6x3.8 13 22 3.6x3.8 14 26 3.6x3.8 15 24 26 3.9x3.9 16 3.7x3.6 17 30 3.7x3.6 18 11 3.8x0.5 3.8x0.5 19 13 15 3.8x0.5 20 17 3.8x0.5 22 21 3.8x0.5 21 23 12 0.5x4.3 24 15 0.4x4.2

4.2 Standard Button Sewing Pattern List

No.	Pattern	Thread	Standard Sewing	No.	Pattern	Thread	Standard Sewing
		Numbe	Length X(mm)			Numb	Length X(mm)
		r				er	
25		17	0.4x4.2	26		19	4x3.7
27		26	3.8x3.6	28		24	4x3.7
29		30	3.9x3.7	30	Ø	20	3.2x2.8
31	8	29	3.2x2.8	32	٨	20	3.2x2.8
33		29	3.2x2.8	34		19	4x3.8
35		22	3.6x3.8	36		24	3.7x3.8
37		26	3.6x3.8	38		19	3.9x3.8
39	2	22	3.7x3.9	40		19	3.8x3.8
41		22	3.6x3.8	42	\otimes	24	3.8x3.8
43	\bigotimes	26	3.7x3.6	44		12	4.2x0.4
45		13	3.7x0.2	46		12	0.4x4.2
47		19	3.8x3.6	48		24	3.8x3.6
49	P	20	3.2x2.8	50		20	3.2x2.8

5 Update Pattern Data by USB Disk

Support import (addition) of single VDT pattern:

(01) Import pattern: import (add) pattern, and cover the pattern of the same number with imported pattern;

(2) Export pattern: export all external patterns to USB storage device;

(3) Delete pattern: clear (format) the panel's storage area for external patterns;

5.1 Pattern Data Update

User can import VDT format patterns to the control system via U disk, with the updated pattern number from 101 to 200. User can also export existing patterns numbered 101~200 that are stored in the control system to U disk.



4) Press key to select "01 import pattern" and insert the U disk containing patterns to the USB interface at the right side of the panel.

5) Press key, and when the panel hint "operation executing, please do not turn off the machine", the

patterns are starting to be imported.

Note: before this operation, please confirm the U disk having been connected to USB interface; if not, this update operation cannot be done and the panel will hint "M-324 U disk not found".

6) After the update, the panel will display "Operation succeeded!" and the system will automatically return to the interface for importing patterns.

Note: if there are already patterns numbered 101~200 in the panel, patterns named with different numbers can be added to the system via U disk following the above operations; if the pattern numbers in the U disk are the same with those in the panel, the patterns with the same number in the panel will be replaced.

In addition, apart from the pattern update import operation under function number "01", user can also change the function number to "02" and "03" to export and delete patterns respectively. To change function number to "02" means to back up imported patterns, while to change function number to "03" means to delete all patterns numbered 101~200, which may be done when external pattern storage area is full or the data format of the external pattern storage area is abnormal.

7) Open pattern lock: after update, if the patterns updated via U disk	Jack
cannot be selected on the sewing interface, the possible reason is	
that the pattern lock is unopened, for the default setting of	
patterns number 101~200 is locked and unable to be selected.	
User need make the following operation:	M SEL:
When sewing LED is off, press to enter system menu,	01 Sys U param 02 Sew counter <mark>03 Normal pat lock</mark> 04 Reg P pat
press key to select "03 normal pattern lock" and press	
key to enter.	
Under this mode, the left part A displays the normal pattern	
number, and user can press key to change from $1\sim 200$;	[P1] [P2] [P3] [P4] [P5]
the right part B display the pattern status, "ON" for open and	

"OFF" for lock. User can press to open or lock the	Jack M // U
pattern.	
	[P1] [P2] [P3] [P4] [P5]
	[23] [23] [74] [84]
8) Use key and key to open the pattern, press	key to save and return to the system menu, and
then press key again to return to the normal sewing mo	de.

6 Appendix 1

6. 1 Main Control Error List

Code	Name	Content	Solution
E-001	Pedal not in the middle position	Pedal is stepped down when entering the ready sewing status	Make sure the pedal is not stepped down when entering the ready sewing status
E-002	Pause	RESET key is pressed while sewing machine is running. The machine pauses.	Restart or return-to-origin after pressing RESET key for thread-trimming.
E-003	Head Tilt Error	Head tilt detection switch is set as ON.	The sewing machine cannot be operated with the head tilted. Return the sewing machine head to its proper position. Technicians can use short circuit board to short circuit the 2P blue plug on the head board.
E-004	Low Voltage Error	The voltage of power is too low.	Sampling UZKIN analog quantity is too low. Confirm the voltage of power and related circuit.
E-005	Overvoltage Error	The voltage of power is over the specified value.	The detected signal of AC_OVDT is high. Confirm the voltage of power and related circuit.
E-007	Main shaft driver abnormal	The error is detected in main shaft driver.	Turn off the power and repower the machine after a while.
E-008	24V power supply error	24V over-current	Turn off the power supply and then turn it on again after a while.
E-009	24V power supply error	24V voltage is too low	Turn off the power supply and then turn it on again after a while.
E-010	Air valve (fan) problem	After start, the system detects abnormal signal about the voltage of the air valve or fan.	Shut down the machine to check if there is any short circuit
E-012	Presser Foot Position Error	Presser foot is not at proper position.	Turn off the power and check connection of the CZ025 at the head signal circuit board. If the connection is ok, check the optocoupler.
E-013	Encoder Disconnection	The system can't detect ADTC signal.	Turn off the power, and confirm whether plug X5 is connected properly.
E-014	Motor Running Abnormal	When the main shaft motor is running, the range of the electrical angle is abnormal at 0°	Shut down the machine to check the motor encoder.

Code	Name	Content	Solution
E-015	Beyond Sewing Area	The sewing area is beyond the limit.	Press RESET switch to confirm the pattern and its X/Y scale rate. Triggering condition: pattern computation error.
E-016	Needle Bar Up Position Error	The needle bar is not at UP position.	The main shaft stop position error may be caused by main shaft drive, or may be caused by human error. Turn the hand wheel to return the needle bar to its UP position.
E-018	Cutter Position Error	The cutter is not at the right position.	Turn off the power and check the connection of the CZ024 at the head signal circuit board. If the connection is ok, check the optocoupler.
E-019	Emergency Stop Switch Not at Normal Position	Before start, the emergency stop switch is found pressed down	Manually solve the problem
E-020	Stepping Software Version Error	The software version for the stepping board is false.	Change the stepping board or update the stepping board program.
E-022	Machine Stop Due to Aging	After entering aging mode, the machine stops.	Shut down the machine
E-023	Thread-catching Position Error	The thread-catching device is at wrong position.	Turn off the power and check the connection of the CZ026 at the head signal circuit board. If the connection is ok, check the optocoupler.
E-025	X Origin Search Error	X origin sensor doesn't change.	Turn off power and check the connections of CZ021 on head signal circuit board and X9 on control box.
E-026	Y Origin Search Error	Y origin sensor doesn't change.	Turn off power and check the connections of CZ022 on head signal circuit board and X9 on control box.
E-027	Presser Origin Search Error	Presser origin sensor doesn't change.	Turn off power and check the connections of CZ025 on head signal circuit board and X9 on control box.
E-028	Thread-catching Origin Search Error	Thread-catching origin sensor doesn't change.	Turn off power and check the connections of CZ026 on head signal circuit board and X9 on control box.
E-030	Communication Error between Main-board and Stepping Board	Communication between Main-board and Stepping Board is down.	Turn off the power and repower the machine after a while. Check the connections of the communication cable, main board and drive board.
E-031	Stepping driver Error	Over-current occurs to stepping drive board.	Turn off the power and repower the machine after a while.

Code	Name	Content	Solution
E-034	Main shaft driver abnormal	The error is detected in main shaft driver.	Turn off the power and repower the machine after a while.
E-035	Main Board IPM Sudden Over-current	The current for the main board IPM drive module is too much within a short period of time	Turn off the power and repower the machine after a while. Change the main shaft motor to check if the motor is damaged; if problem remains, change the main board.
E-036	Main Board IPM Multiple Over-current	Over-current happens repeatedly to the main board IPM drive module after power on	Turn off the power and repower the machine after a while. Change the main shaft motor to check if the motor is damaged; if problem remains, change the main board.
E-037	Main Shaft Over-current	Motor stops.	If there is no mechanic problem, check the connection of the main shaft encoder
E-038	Machine Lock Error	The main-shaft of sewing machine can't rotate due to some problem.	After user sending order to rotate the main shaft, the main shaft motor doesn't respond. Check the PWM curve of the main shaft motor, the signal of the encoder and whether there is mechanic problem.
E-039	Main Shaft Over-speed	The system detects the actual speed of the main shaft motor exceeding the speed limit	Turn off the power and repower the machine after a while.
E-040	Current Abnormal When Stop	Over-current occurs during the stop process of the main shaft	Turn off the power and repower the machine after a while. Change the main shaft motor to check if the motor is damaged; if problem remains, change the main board.
E-043	Thread-trimming Motor Origin Search Error	Thread-trimming origin sensor doesn't change.	Turn off power and check the connections of CZ026 on head signal circuit board and X9 on control box.
E-044	Machine Head Board Parameter Abnormal with Lower Computer	The lower computer read abnormal parameter from the machine head board.	Check the machine head board and the connection of X9 cable. Press RESET key to use parameter No. 67 to restore the parameters of the machine head board.
E-056	Stepping Close Loop DSP1(X25/X27) Communication Error	The verification of the received order at stepping board is failed	Check the connection of SPI communication cable
E-057	Stepping Close Loop DSP1 1 st Route (X27) Over-Current	Large current is detected by hardware	At first, please check motor. Then check the resistance and sensor value. If the motor is ok, user should check the hardware on stepping board

Code	Name	Content	Solution
E-058	Stepping Close Loop DSP1 1 st Route (X27) Position Error	The detected encoder response position is not consistent with the position set in the order.	Change the stepping motor to open loop mode and run it. If the motor can work normally, the motor is ok. If the motor can't work normally, user should check the driving part on the stepping board and the motor itself. After the above operations, user should check the encoder. Make sure the connection and the condition of the encoder cable is ok. And make sure the signal response part on the stepping board and the encoder itself is ok.
E-059	Stepping Close Loop DSP1 1 st Route (X27)Over- speed	The system will give this warning when it detects the abnormal motor speed via the encoder response signal.	The checking method is the same with that for Position Error
E-060	Stepping Close Loop DSP1 2 nd Route (X25) Over-Current	Large current is detected by hardware	At first, please check motor. Then check the resistance and sensor value. If the motor is ok, user should check the hardware on stepping board
E-061	Stepping Close Loop DSP1 2 nd Route (X25) Position Error	The detected encoder response position is not consistent with the position set in the order.	Change the stepping motor to open loop mode and run it. If the motor can work normally, the motor is ok. If the motor can't work normally, user should check the driving part on the stepping board and the motor itself. After the above operations, user should check the encoder. Make sure the connection and the condition of the encoder cable is ok. And make sure the signal response part on the stepping board and the encoder itself is ok.
E-062	Stepping Close Loop DSP1 2 nd Route (X25) Over- speed	The system will give this warning when it detects the abnormal motor speed via the encoder response signal.	The checking method is the same with that for Position Error
E-063	Stepping Close Loop DSP2(X21/X23) Communication Error	The verification of the received order at stepping board is failed	Check the connection of SPI communication cable
E-064	Stepping Close Loop DSP2 1 st Route (X23) Over-Current	Large current is detected by hardware	At first, please check motor. Then check the resistance and sensor value. If the motor is ok, user should check the hardware on stepping board

Code	Name	Content	Solution
E-065	Stepping Close Loop DSP2 1 st Route (X23) Position Error	The detected encoder response position is not consistent with the position set in the order.	Change the stepping motor to open loop mode and run it. If the motor can work normally, the motor is ok. If the motor can't work normally, user should check the driving part on the stepping board and the motor itself. After the above operations, user should check the encoder. Make sure the connection and the condition of the encoder cable is ok. And make sure the signal response part on the stepping board and the encoder itself is ok.
E-066	Stepping Close Loop DSP2 1 st Route (X23) Over- speed	The system will give this warning when it detects the abnormal motor speed via the encoder response signal.	The checking method is the same with that for Position Error
E-067	Stepping Close Loop DSP2 2 nd Route (X21)Over-current	Large current is detected by hardware	At first, please check motor. Then check the resistance and sensor value. If the motor is ok, user should check the hardware on stepping board
E-068	Stepping Close Loop DSP2 2 nd Route (X21) Position Error	The detected encoder response position is not consistent with the position set in the order.	Change the stepping motor to open loop mode and run it. If the motor can work normally, the motor is ok. If the motor can't work normally, user should check the driving part on the stepping board and the motor itself. After the above operations, user should check the encoder. Make sure the connection and the condition of the encoder cable is ok. And make sure the signal response part on the stepping board and the encoder itself is ok.
E-069	Stepping Close Loop DSP2 2 nd Route (X21) Over-speed	The system will give this warning when it detects the abnormal motor speed via the encoder response signal.	The checking method is the same with that for Position Error
E-070	Stepping Board 90V Power Supply Error	Stepping board 90V is over-current	Turn off the power supply and then turn it on again after a while.
E-071	Abnormal position of lifting head	The lifting head is not in the correct position.	Check whether the signal of the lifting head sensor is normal.
E-072	The following middle pressure foot motor origin retrieval is abnormal	The motor cannot find the origin.	Need to enter the detection mode to check whether the motor power line or the encoder line is connected stably and whether the motor is running normally.
E-073	Abnormal large XY stitch spacing	XY needle spacing over 12.7mm.	Reduce the stitch spacing.

Code	Name	Content	Solution
E-090	USB upgrade stepping error	Query step state timeout.	Check if the step board procedure is correct.
E-093	Step closed loop DSP1(X25/X27) communication packet calibration error	Master and step communication error.	Check whether the master and step communication lines are stable and reliable.
E-094	Step closed loop DSP1(X25/X27) communication packet invalid command	Master and step communication error.	Check whether the master and step communication lines are stable and reliable.
E-095	Step closed loop DSP2(X21/X23) communication packet calibration error	Master and step communication error.	Check whether the master and step communication lines are stable and reliable.
E-096	Step closed loop DSP2(X21/X23) communication packet invalid command	Master and step communication error.	Check whether the master and step communication lines are stable and reliable.
E-097	Master control software and motherboard hardware types are inconsistent	Wrong use of main control panel.	Replace the main control panel of the corresponding product.
E-098	Error in CRC calibration of step DSP1 curve data	Abnormal step curve data.	Update the step curve of DSP1.
E-099	Error in CRC calibration of step DSP2 curve data	Abnormal step curve data.	Update the step curve of DSP1.
E-100	System parameter version changes	System parameter version changes	Automatic recovery of system parameters
E-101	System parameter range exception	System parameter range exception	Automatic recovery of abnormal parameters

6.2 Operation Panel Error List

Code	Name	Content	Solution
M 200	Momory Abnormal	There exists error with the data defined	Internal error: user need update the panel
M-300	Memory Abnorman	by the operation panel.	program.
M-301	Memory Abnormal	Panel memory data abnormal	Internal error: user need update the panel
WI-301	Wembry Abiofinal		program.
		The machine type data read by the	Press RESET key to automatically enter
M-302	Machine Type Parameter Error	operation panel is not within the set	parameter No. 241 to select and save the
		range.	defined machine type.
M-303	UK Parameter Abnormal	Abnormal range of the parameter read	Press RESET key to enter the system menu
WI-303	OK I arameter Abhormar	by the panel from EEPROM	and recover the default setting.
M 204		Abnormal range of parameters received	Press RESET key to enter the system menu
M-304	Head Board Parameter Abnormal	by panel from down computer	and recover the default setting.

Code	Name	Content	Solution
M-305	Normal Pattern Parameter Abnormal	When using pattern parameter, the panel detects abnormal parameter range.	Press RESET key to enter the system menu and recover the default setting.
M-306	Pattern Not Found or Locked	The prepared pattern No. hasn't been registered to ROM or set as not to be read. The pattern No. is displayed as 0.	Press RESET key, confirm the pattern No. and make sure the pattern is unlocked.
M-307	Pattern Data Abnormal	When the panel reads the sewing data of the pattern, the data format is found to be abnormal.	Select other patterns.
M-308	Sewing Data Too Large	When being computed, the size of the pattern data is found to be too large and beyond normal range.	Select other patterns for sewing.
M-309	Pattern beyond Sewing Range	When being computed, the pattern is found to be beyond sewing range.	Press RESET key, confirm the size of the pattern is within the set range of parameters K056, K057, K058 and K059.
M-310	Stitch Length beyond Normal Range	When being computed, the stitch length is found to be beyond normal range.	Press RESET key, confirm the pattern and X/Y scaling up rate.
M-311	Pattern Data Communication Abnormal	Error occurs when the panel sends pattern data to the main control.	Check the pattern and the cable connection between the panel and the main control.
M-312	Normal Pattern Lock Abnormal	The panel can't read the normal pattern lock data from EEPROM.	Press RESET key to enter the system menu and recover the default setting.
M-313	Present Pattern Parameter Abnormal	The panel can't read the pattern parameter data from EEPROM.	Press RESET key to enter the system menu and recover the default setting.
M-314	Parameter Setting beyond Normal Range	The set value of the parameter exceeds normal range.	Press RESET key and change the set value.
M-315	Counter Abnormal	The panel can't read the counter data from EEPROM.	Press RESET key to enter the system menu and recover the default setting.
M-316	Counter Exhausted	The counter has reached the upper limit after the sewing.	Press RESET key.
M-317	Communication Error between Main Board and the Panel	There is no communication or communication error between main board and the panel.	Turn off the power and repower the machine after a while. Check the communication cable, the main board and the panel.
M-318	The Storage Space for External Patterns Full	When patterns are imported to the control panel via USB, the storage space for such patterns is found full.	First export the internal patterns before deleting them, and then import patterns again.
M-319	External Patterns Format Abnormal	Pattern data is found abnormal when its format data is read by the control panel	Enter the parameter import/export mode of the system and delete such patterns.
M-320	Imported Pattern Already Exist	When importing pattern from USB storage device, pattern with the same number is found to exist already in the panel.	Change the number of the pattern in the USB storage device to be imported.

Code	Name	Content	Solution
M-321	Imported Pattern Not Found	When importing pattern from USB storage device, the pattern to be imported is not found.	Select existing patterns in the USB storage device.
M-322	Pattern Deletion Error	When deleting external pattern, it is found to be not exist.	Select existing pattern for deletion.
M-323	Pattern Read Error	There is problem with reading pattern data from external pattern storage area.	Please select other patterns.
M-324	USB Device Not Connected	When importing or exporting patterns, the panel detects abnormal USD storage device.	Change another USB storage device
M-325	The Size of Imported Pattern Too Large	When importing patterns, the panel detects that the imported pattern is too beyond the size limitation.	Make sure the imported pattern is within the size range.
M-326	External Pattern Not Found	Under sewing ready status, the external pattern to be read is not found.	Please select other patterns.
M-327	P Pattern to Be Deleted is Cited by C Pattern	When being deleted, the P pattern is found to have been added to certain C pattern.	First delete the P pattern from the C pattern and then delete the P pattern.
M-328	USB Patterns Not Found	The pattern number to be imported can't be found after USB connection	Make sure the pattern is correctly named and saved under the designated directory of the USB storage device.
M-329	No Registered P Pattern	Before entering the P pattern or C pattern copy/deletion mode, no P pattern has been registered.	Please register P patterns before entering those modes.
M-330	All Normal Patterns Shut Down	Before entering P pattern registration mode, all normal patterns are found to have been shut down.	Please unlock normal patterns.
M-331	No More Registration of P Patterns	Before entering P pattern registration mode, it is found that all P patterns have been registered.	Please delete some P patterns before registering new ones.
M-332	No Deletion of the Last C Pattern	The C pattern to be deleted happens to be the last one.	The deletion of the remaining last C pattern is prohibited.
M-333	Alarm to Lubricate the Machine	It is time to add lubricating oil to certain parts of the machine, so the machine stops working.	Restart the machine, enter parameter No. 245 and press RESET key, and then power on again
M-999	Undefined Error	Undefined error of the operation panel	Shut down the machine and update the control panel program.

6.3 Standard Button Sewing Pattern List

NO.	Patterns	Stitch	$Length \times Width$	NO.	Pattern	Stitch	$Length \times Width$
		Numb	(mm)			Numb	(mm)
		er				er	
1		41	16.1×2	2		41	10.2×2
	******				HIMMAN AND		
3		41	16×2.4	4		41	24×3
	TANA ANA ANA ANA ANA ANA ANA ANA ANA ANA				*******		
5		27	10.1×2	6		27	16×2.4
	\$~~~~~				,,,,,,,,,		
7		35	10.1×2	8		35	16×2.4
	MANAAAAA A				TANAAAAAA		
9		55	24×3	10		63	24×3
	******				NAMANAMANA		
11		20	6.1×2.4	12		27	6.2×2.4
	AAAAI				MALAALA		
	* * * * * *				188555881		
13		35	6.1×2.4	14		14	8×2
	TRADATA 1						
15		20	8×2	16		27	8×2
	AMAA				ALLANAAA		
					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
17		20	10×0	18		27	10×0
					· · · · · · · · · · · · · · · · · · ·		
19		35	24.8×0	20		40	25.2×0
21		43	35×0	22	5	27	4×20
21		15	557.0		N	27	17.20
					A A		
23	¥	35	4×20	24	3	41	4×20
23	1	55	4/20	24		71	4/20
	A A A A A A A A A A A A A A A A A A A				*		
25	*	55	4×20	26		17	0×20
25		55	7/20			1/	0/20
	1						

27		20	0×10	28		27	0×20
29		51	10.1×7	30		62	12.1×7
31		23	10.2×6	32	Q	30	12×6
33		47	7×10	34		47	7×10
35		89	24×3	36	******	27	8×2
37	\bigcirc	25	11.8×12	38	\bigcirc	45	12×12
39	W	28	2.4×20	40		38	2.4×25
41	*******	38	2.4×25	42	himpinoun	57	2.4×30
43	tyrnadional data and	75	2.4×30	44	porteen constant of the	41	2.4×30
45		89	8×8	46		98	8×8
47		86	8×8	48		100	8×8
49		129	8×8	50		149	8×8
51		130	7.9×7.9	52		51	12.4×10.2
53	-D	50	12.4×10.2	54		52	21×6

-						
55	57	21×6	56		99	19×3
57	115	40×5	58		115	40×5
59	136	6.6x25	60		158	6.6x25
61	178	6.6x25	62		135	6.6x25
63	155	6.6x25	64		176	6.6x25
65	308	6x25	66		257	6x20
67	108	40×30	68	X	80	40×30
69	64	40×30	70		96	30×30
71	76	30×30	72		60	30×30
73	52	40×30	74		40	40×30
75	32	40×30	76		44	30×30
77	36	30×30	78		28	30×30
79	60	40×30	80	\ge	48	40×30
81	36	40×30	82		56	30×30

83	44	30×30	8	4	\ge	67	40×30
85	39	40×30	8	6	\mathbf{X}	35	30×30
87	145	16.2x16.2	8	8	HALF HALF	153	12x12.4
89	74	20×24	9	0		54	20×24
91	65	20×20	9	2		49	20×20
93	39	20×20	9.	4		63	25×20
95	51	25×20	9	6		45	25×20
97	42	25×20	9	8		33	25×20
99	27	25×20	1	00	\square	88	30×25

7 Appendix 2

7.1 Installation Size of Control Box



7.2 The Control System Diagram

(1) TASC201-2N/Z





制版说明书 Manual book

触摸屏 Touching Panel Type

1900G-D 1903G-D 1906G-D

高速电子套结机 Special High-Speed Sewing Machine

CONTENTS

1. Start End of Input Mode	
1-1. Entry to Input Mode1-2. Return to Common Sewing Mode	
2. Basic Operation • Display	
 2-1. Standard Interface for Input Mode 2-2. Selection of Functions 2-3. Input Figure	
3. Instruction on Operation Order.	
 3-1. Input of Pattern	
4. Input of Pattern	
 4-1. Normal Sewing	127 135 137 139 147 155 155 156 157
5. Correction of Pattern	
 5-1. Point Correction	
6. Pattern Operation	
 6-1. Copy Pattern (086) 6-2. Pattern Move (085) 6-3. Pattern Deletion (087) 6-4. Pattern Load	
7. Initialize (090) U Disk	
8. Trial Sewing	
9. Setting Function	
9-1. Presser Inversion Setting (091)9-2. Set the Reference Value of Upper Thread Tension (113)9-3. Set the Reference Value of Intermediate Presser Height (115)	
10. Select Ending Method (110)	
11. Allocate Functions to F1~F5 Keys (112)	
12. Display of Detail Information on Set Value (093)	

13. Display of Detail Information on Present Needle Position	195
14. Settings of Display	197
15. Element Forward • Element Backward (130, 131)	199
16. About Direct Indication of Touching Interface	200
16-1. Direct Indication of Coordinate 16-2. Direct Indication of Needle Entry Point	200 201
17. Select the Displayed Function Code	203
18. Codes of Function	204

1900G

Pattern-designing Instructions for Touch Panel

1. Start • End of Input Mode

1-1. Entry to Input Mode

(1) Turn on the Machine

After user turns on the machine, the interface for data input will be displayed.



<Interface of Data Input>

(2) Entry to Mode Interface

Press. to shift between the data input interface and the mode selection interface (as shown in right). In the right interface, user can perform some detailed settings and editions.



<Mode Interface>

③ Entry to Input Mode

Press to quit the mode selection interface. At this moment, the system will ask whether to have access to the interface for inputting pattern edition.

Press to have access to the standard interface

of new pattern edition. Press it to return to the mode selection interface.



1-2. Return to Common Sewing Mode

Have Access to Common Sewing Mode

When user selected the common sewing mode and

pressed , the interface for confirming the return to the sewing mode would be displayed

At this time, press to have access to the interface of data input in the common sewing mode.



2. Basic Operation · Display

General operation and display in input mode.

2-1. Standard Interface for Input Mode

This is the standard interface for input mode



The keys in the standard interface of input mode are shown at below:

No.	Name	Content
А	Load design	Display the interface for loading design
В	Design input	Display the interface for design input
С	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
F	Information of existing needle position	Display the information of the existing needle position
G	Code list	Display the 【Code list】
Н	Information	The information interface will display the detailed information of the needle position at present.

No.	Name	Content
Ι	Display setting	Display the interface for setting
J	Trial sewing	Display the trial sewing interface
К	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
М	Function keys	 Enable to call the functions on the buttons directly 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.
0	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.

No.	Item	Content
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

2-2. Selection of Functions

The following is the selection of functions in the input mode.

1 Display of the Code List

In the standard interface of the input mode, press to have access to the interface of the

Code List.

② Selection of Functions

Select the needed functions keys in the column A, the selected key will be shown reversely. After pressing Keys B, the column A will be displayed with its order changed.



③ Directly Input the Function Code

After user presses the Key C, the interface of function list will be displayed. At this moment, user can input the functional code with the key in area E directly. The user can also select the functional code with +/-Keys (F). After the Help Key (G) was pressed, the relevant information of the inputted functional code will be display in area H.

Input the needed functional code and then press Enter Key (I), the system will return to the Code List.

Confirm the Selection

After user presses the needed functional key

and the setting interface of that function will be displayed. For the interface for settings, please refer to the functions.



2-3. Input Figure

The following is the method for inputting the general figures to make the pattern data

(1) Input the item for setting

The right picture is the interface after user inputted the set value of the functional setting items.

[i.e.:Change on length of sewing stitch form]

The inputted setting item type is displayed at G; the inputted value is displayed at C.

After pressing figure key A, user is able to change the inputted figures. User can also change the inputted figure with +/- Keys B. The unit and range of change will be displayed at H.

Press E to confirm the inputted value. Press F to cancel the inputted value.


(2) Input the parameters of mechanical control order

After user input the parameters of mechanical control order, the right interface will be displayed.

The method for inputting is same to that in inputting set value of item. The function code and name of the inputted parameter are displayed at area G.



2-4. Pointed Position

At setting the pointed position of function, the interface at right will be displayed. The selected functional code is displayed at J.

① Press Keys in area A

When the needle moves to the existing icon position M, the coordinates of it at L will be updated. Press

A to move the icon. The Key B is for setting the shape point or needle entry point while C for confirming the settings. The number of the inputted points will be displayed at K.

The display of Key B is depended on the function selected

② Press Key D to withdraw the movement

Key D will help you to back to the previous position. If the input point is just confirmed, user can press this key to cancel the confirmation and return to the previous confirmed key.



3 Press Key E

Press E to let the out presser back to the position at the beginning of the input. At this time the system will perform the calculation with the inputted point up to then, and track the created element. Move to the end of element and the data is inserted.

④ Press Key I

Press I to cancel the data at inputting, and then the system will return to the standard interface.

⑤ Press F for directly allocating coordinate.

Then the interface for directly allocating the coordinate will be activated.

If the setting is out of the reasonable range, the warning figure will be displayed on N.



3. Instruction on Operation Order

The followings are the serial operations from inputting to trail sewing. For detailed information, please refer to each item.

3-1. Input of Pattern

Make the pattern below with input functions



① Input of Jump Feeding

Press Key A in the standard interface, so as to have access to the set interface for jump feeding (as shown in right).

Input point:

	X (mm)	Y (mm)
1	-13.0	13.0
2	13. 0	13.0
3	13. 0	5.0
4	0.0	10.0
5	-13.0	5.0



In the jump feeding interface, press Key B to have access to the interface for confirming jump feeding position.



In the interface for confirming the jump feeding

position, press (C) to move the needle to the Position 1, then press Key D and E.

② Input of Linear Normal Sewing

In the standard interface, press Key F to have access to the interface of Code List.

In the interface of code list, select the Linear Normal Sewing (Code 023) then press ENTER.

In the interface for setting linear normal sewing, press Key G to have access to the interface for setting the length of sewing stitch.

Press "3" and "0" orderly, and then press the ENTER in the interface for setting the sewing stitch.

Return to the interface for setting the linear normal sewing. In that interface, "3.0mm" will be displayed on the Key G. Please press ENTER (H) at this moment for confirm the sewing stitch length.





In the interface for setting the position of linear normal sewing, please press Keys (I) to move the needle from position 1 to position 2, and then press Key J.

Repeat the above operations until the needle moves to the Position 5 then press ENTER (K). At daily working, user can press K when the icon moves to the last position.

③ Input of Thread-trimming

In the standard interface, press Thread-trimming Key (L) to have access to the confirmation interface of thread-trimming.



Press the Enter Key, and then the machine will trim the thread at position 5.

After the above operations, the Key N is displayed on standard interface.

Then the pattern in the right picture is made.



3-2. Trial Sewing

By using the input functions, user can confirm the pattern for sewing according to the pattern made or the data acquired in trial sewing.

1 Display of Interface for Preparing Trial Sewing

Press in the standard interface to have access to the interface of trial sewing preparation

2 Display of Interface for Trial Sewing

Press Key A to have access to the interface of trial sewing. In that interface, user can perform the normal operations on sewing machine; also can he carry out the trial sewing with the pattern data.



In the interface of trial sewing, press Key C to return to the interface of trial sewing preparation, and then press Key B to back to the standard interface of input mode.



3-3. Correction of Figure

Correct the data made in "3-1 Input of Pattern" (p.13).

(1) Deletion of Element

With at area A, user can move the needle to position 1 at the midway of the jump feeding.

Press Key B at the standard interface, and then press Key C in the interface for confirmation.

Then the jump feeding to position 1 is deleted, and the needle returns to the origin.

At this moment, the linear sewing from 1 to 5 begins from the origin.





② Insert of Jump Feeding

In the standard interface, press Key E to move the needle to D in the position appointment interface, then inserts the jump feeding.

With the display of the picture below, user can confirm that the positions of needles are moved relevantly.



③ Spot Deletion

In the standard interface, press Keys at Area A to move the needle to a position.

Select the Absolute Point Deletion (Code 074) in the Functional Code List to have access to its interface.

When deleting the needle entry point with even serial

number, press F to move the needle within the range of the deleted points for appointment. At here, we just select two needle-entry points. Appoint the needle to position E and then press Key G

You can see from the below picture, the selected points are deleted.







④ Point Adding

In the standard interface, press Keys (A) to move the needle to position H, and then select "Absolute Point Adding" (Code 076).

In the position appointment interface, press Keys (J) to move the position to point I(where we would like to add a new point.), then press K for confirmation.

As shown in the picture below the new needle entry point is added.



⑤ Point Move

Use Keys (A) in the standard interface to move the needle to the position L, and then select "Absolute Point Move" (Code 075).

Use Keys (N) at position appointment interface to move the needle to M, and then press ENTER (O).

As shown in the picture below, the needle entry point is moved.





061 Sewing speed section change

6 Change of Speed

Move the needle to Position 3 at standard interface, and then select the "Sewing Speed Section Change" (Code 061).

In the interface for inputting the set value, use Number Key (P) to input the speed (i.e. it is set at 800RPM). At last press ENTER (Q) for confirmation.



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In the position appointment interface, press Feeding Forward Key (R) to move the needle to the Section M, where the speed is wanted changing.

Press ENTER(S) to change the speed within the pointed section and to return to the standard interface.



3-4. Input of Pattern

Input the made data of pattern into the U disk or memory.

1 Display of Interface of Pattern Input

Press the **interface** in the standard interface to have access to the interface of pattern input.

② Interface of Selection on Media

Press Media Selection Key (A) to have access to the interface for selecting the memory and the U disk.



③ Selection of Media for Saving

Select the type of the input object A



④ Selection of Pattern Number

In the interface of pattern input, user can press number keys (C) or +/- Key (D) to select an empty pattern number.

⑤ Input of Pattern

Press ENTER B to input the pattern to the selected memory or U disk. After the in the input, the standard interface will be displayed

If the selected pattern number has already existed, the system will hint the user whether to replace it. At this moment, user can press ENTER to confirm the replacement

3-5. Loading Pattern

Load the pattern data in the memory or U disk.

① Display of Interface for Loading Pattern

Press in the Load Key in the standard interface to have access to the interface for loading pattern.

② Selection of Pattern

The selected button will be displayed in dark A.

③ Load Pattern

After pressing ENTER (D), the data of the selected pattern is loaded. After the system loads the pattern, the standard interface will be displayed.



4. Input of Pattern

4-1. Normal Sewing

(1) Jump Feed (020)

It is used when the user wants to move the presser to the pointed location with the main-shaft motor remaining still.

1 Display of Interface for Setting Jump Feed

In the standard interface, press the Jump Feed Key

(A) or select the Jump Feed (Code 020) 020 at the Code List. After that operation, the interface of jump feed setting is displayed.



② Set the Jump Feed

Press ENTER (C) to have access to the interface of coordinates input.





Press the Direction Keys **C** in the coordinate input interface, to move the needle in the ordered direction. Hold the direction key to keep the needle moving.

④ Position of Input

Move to the pointed position. Press the Point Confirmation Key H to input that position as a shape point.

(5) End the Setting of Jump Feed

Press the ENTER (I) to input the set data and return to the standard interface. Repeat the operations of step 3 and step 4, the set data can also be inputted.

(2) Linear Normal Sewing (023)

After the user fixes a point, the linear connecting that point and the needle position will inputted with the set sewing stitch length.

① Display of Interface for setting the linear normal sewing

In the interface of code list, select the linear normal sewing (code 023) to have access to the interface for setting the linear normal sewing.





② Linear Normal Sewing Setting

In the interface for setting the linear normal sewing, the set length of sewing stitch will be displayed at Area A while the set value of the existing sewing speed will be displayed at Area B

Press the item button, which is wanted changing, to activate the input interface of the set value. In the input interface, user can use Number Keys (D) or +/-Keys (E) to set the value. Press the ENTER (F) to confirm the inputted value and allow the system return to the setting interface of linear normal sewing.

After setting or without needs in changing, user shall press the ENTER (C) in the linear normal sewing setting interface to have access to the coordinate input interface.





③ Needle Position Move



Press the direction key (G) in the coordinate input interface to move the needle position to the pointed direction. User can also hold the direction key to keep the needle moving in the set direction.

④ Input Position

Move to the pointed position and press Confirmation Key (H) to have that position inputted as a shape point (Passing Point).

(5) End the Setting of Linear Normal Sewing

Press the ENTER (I) to input the set value. And the system will return to the standard interface.

User can also input such values by repeating the operation in step 3 and step 4.

(3) Curve Normal Sewing (024)

With this function, user can easily input the smooth curve into system.

1 Display of Interface for Setting Curve Normal Sewing

In the interface of code list, select the curve normal sewing (Code024) to activate the interface for setting the curve normal sewing.

② Setting of Curve Normal Sewing

In the interface for setting the curve normal sewing, the set value of existing sewing stitch length is displayed at A, while the set value of existing sewing speed is shown on B.

Press the button of the item, which is wanted changing, so as to activate the interface for inputting the set value. The setting methods on the sewing speed and the stitch length of the curve normal sewing are same to that of the linear normal sewing.

After the setting (or without need to change), the coordinate input interface will be displayed as long as ENTER (C) is pressed.

③ Move Needle Position

In the coordinate input interface, user can press the Direction Key (D) to move the needle in the pointed direction.

④ Input Position

Move to the pointed position and press Passing Point Key (E) to have that position inputted as a shape point (Passing Point).

Or press Confirmation Key (F) to input that position as an Angle Point.

For angle point, please refer to the "4-9. About Angle Point" p.57.

(5) End the Setting of Curve Normal Sewing

Press the ENTER (G) to input the set value. And the system will return to the standard interface.

User can also input such values by repeating the operation in step 3 and step 4.





(4) Arc Normal Sewing (025)

After the user fixes two points, the arc connecting that point and the needle position will inputted in the set sewing stitch length. The sewing direction is determined by the input order of the pointed spots.

(1) Display of Interface for Setting Arc normal Sewing

In the interface of code list, select the arc normal sewing (code 025)

interface for setting the arc normal sewing.

② Setting of Arc Normal Sewing

In the interface for setting the arc normal sewing, the set value of existing sewing stitch length is displayed at A, while the set value of existing sewing speed is shown on B.

Press the button of the item, which is wanted changing, so as to activate the interface for inputting the set value. The setting methods on the sewing speed and the stitch length of the arc normal sewing are same to that of the linear normal sewing.

After the setting (or without need to change), the coordinate input interface will be displayed as long as ENTER (C) is pressed.



In the coordinate input interface, user can press the

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Direction Key (D) to move the needle in the pointed direction.

④ Input Position

Move to the pointed position and press Point Confirmation Key (E) to have that position inputted as a shape point.

Repeat the operation in step 3 and step 4 to input another 2 points. **Attention:** The number of the inputted points shall be 2! The input will be denied if more than 3 points are inputted.

⑤ End the Setting of Arc Normal Sewing

Press the ENTER (F) to input the set value. And the system will return to the standard interface.



(5) Circle Normal Sewing (026)

After the user fixes two points, the arc connecting that point and the needle position will inputted in the set sewing stitch length. The sewing direction is determined by the input order of the pointed spots.

① Display of Interface for Setting Circle Normal Sewing

In the interface of code list, select the circle normal

sewing (Code 026) 026 to have access to the interface for setting circle normal sewing.

② Setting of Circle Normal Sewing

In the interface for setting the circle normal sewing, the set value of existing sewing stitch length is displayed at A, while the set value of existing sewing speed is shown on B.

Press the button of the item, which is wanted changing, so as to activate the interface for inputting the set value. The setting methods on the sewing speed and the stitch length of the circle normal sewing are same to that of the linear normal sewing.

After the setting (or without need to change), the coordinate input interface will be displayed as long as ENTER (C) is pressed.



In the coordinate input interface, user can press the

Direction Key

④ Input Position

Move to the pointed position and press Point Confirmation Key (E) to have that position inputted as a shape point.

Repeat the operation in step 3 and step 4 to input another 2 points. **Attention:** The number of the inputted points shall be 2! The input will be denied if more than 3 points are inputted.

⑤ End the Setting of Circle Normal Sewing

Press the ENTER (F) to input the set value. And the system will return to the standard interface.



(6) Point Sewing (021)

It can be used when user needs input the stitch to the needle entry point one by one directly

1 Display of Interface for Setting Point Sewing

User can select the Point Sewing (code 021)

Point Sewing Key in standard interface to have access to the interface for setting point sewing.

② Setting of Point Sewing

In the interface for setting the point sewing, the set value of existing sewing speed is shown on B

Press the button of the sewing speed so as to activate the interface for inputting the value. The setting method on the sewing speed of point sewing is same to that of the linear normal sewing.

After the setting (or without need to change), the coordinate input interface will be displayed as long as ENTER (C) is pressed.



In the coordinate input interface, user can press the

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Direction Key (D) to move the needle in the pointed direction.

④ Input Position

Move to the pointed position and press Passing Point Key (E) to have that position inputted as a needle entry point.

User can also input such position by repeating the operation in step 3 and step 4.

(5) End the Setting of Point Sewing

Press the ENTER (F) to input the set value. And the system will return to the standard interface.



(7) Normal Sewing (022)

The linear normal sewing and the curve normal sewing can be inputted.

1 Display of Interface for Setting Normal Sewing

By pressing Normal Sewing Key in the standard interface or selecting normal sewing (code 022)

in the code list, user can have access to the interface for setting the normal sewing.

② Setting of Normal Sewing

In the interface for setting the normal sewing, the set value of existing sewing stitch length is displayed at A, while the set value of existing sewing speed is shown on B.

Press the button of the item, which is wanted changing, so as to activate the interface for inputting the set value. The setting methods on the sewing speed and the stitch length of normal sewing are same to that of the linear normal sewing.

Press ENTER(C) to have access to the interface of coordinate input interface.



③ Appointed Position

In the coordinate input interface, user can press the Direction Key (D) to move the needle in the pointed direction. Press Point Confirmation Key (F) to input the shape point of linear normal sewing. Press Passing Point Key (E) to have the shaping point of curve normal sewing inputted.

(Please refer to "4-9. About Angle Point" p.57.)

④ End the Setting of Normal Sewing

Press the ENTER (G) to input the set value. And the system will return to the standard interface.

For an example, if the points 1, 3 and 4 are fixed, and point 2 is inputted as passing point, the pattern in below picture will be formed.





4-2. Zigzag Sewing(030~033)

The zigzag sewing is the input function to create the needle entry points at both sides of the standard line in a twisted stitch form. It is easy to sew the badge on the sport shirt.

There are 4 kinds of zigzag sewing:

- ♦ Linear Zigzag Sewing (Function Index 030)
- ♦ Curve Zigzag Sewing (Function Index031)
- ♦ Arc Zigzag Sewing (Function Index 032)
- ♦ Circle Zigzag Sewing (Function Index 033)



1 Display of Linear Zigzag Sewing Setting Interface

In the interface of code list, select linear zigzag sewing (code 030)

the interface for setting linear zigzag sewing

② Setting of Linear Zigzag Sewing

In the interface for setting the linear zigzag sewing, the set value of existing zigzag pitch is displayed at A; the set value of existing zigzag width is displayed at B; the set value of existing sewing speed is shown on C.

Press the button of the item, which is wanted changing, so as to activate the interface for inputting the set value. The setting methods of each item are same to that in the linear normal sewing.

The Keys D & G will determine the start direction of the standard zigzag sewing, while the Key E & H will decide the start direction of the offset zigzag sewing

After the setting (or without need to change), the coordinate input interface will be displayed as long as ENTER (F) is pressed



:Standard Zigzag Sewing Left



:Standard Zigzag Sewing Right

:Offset Zigzag Sewing Left



:Offset Zigzag Sewing Right;

③ Move Needle Position

In the coordinate input interface, user can press the



Direction Key (G) to move the needle in the pointed direction.

④ Input Position

Move to the pointed position and press Point Confirmation Key (H) to have that position inputted as a shape point (passing point).

User can also input such position by repeating the operation in step 3 and step 4.





(5) End Setting of Linear Zigzag Sewing

Press the ENTER (I) to input the set value. And the system will return to the standard interface.

The setting method of the standard zigzag in other shapes is same to that of the standard linear zigzag.

The coordinate input method of sewing is same to that of the normal sewing.



4-3. Offset Sewing (034~037)

This function is to create the needle entry points off the standard line in a certain distance.

It is easy to sew the small shapes and the like whose outside circle is the standard line.

There are four kinds of offset sewing

- ♦ Linear offset sewing(Function Index 034)
- ♦ Curve offset sewing (Function Index 035)
- \diamond Arc offset sewing (Function Index 036)
- ♦ Circle offset sewing (Function Index 037)

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1 Display of Linear Offset Sewing Setting Interface

In the interface of code list, select linear offset

sewing (code 034) to have access to the interface for setting linear offset sewing

② Setting of Linear Offset Sewing

In the interface for setting the linear offset sewing, the set value of existing sewing stitch length is displayed at A; the set value of existing offset width is displayed at B; the set value of existing sewing speed is shown on C.

Press the button of the item, which is wanted changing, so as to activate the interface for inputting the set value. The setting methods of each item are same to that in the linear normal sewing.

The Keys D & E will determine the direction of the offset sewing. Pressing Key D is to sew forward at left of the standard line, while pressing Key E is to sew forward at the right of the standard line.



:Offset Left Direction

Offset Right Direction

After the setting (or without need to change), the coordinate input interface will be displayed as long as ENTER (F) is pressed

③ Move Needle Position

In the coordinate input interface, user can press the



Direction Key

④ Input Position

Move to the pointed position and press Point Confirmation Key (H) to have that position inputted as a shape point (passing point).

User can also input such point by repeating the operation in step 3 and step 4.

⑤ End Setting of Linear Offset Sewing

Press the ENTER (I) to input the set value. And the system will return to the standard interface.

The setting method of the offset sewing in other shapes is same to that of the linear offset sewing.

The coordinate input method of sewing is same to that of the normal sewing.







4-4. Double Sewing

This function is for creating the needle entry point to the point which is separated an optional fixes distance in term of the input reference line.

(1) Linear Double Orderly Sewing (040 ~ 043)

Create the sewing so that the sewing composed with the input points and that of the offset figure are in the same direction

There are four kinds of double orderly sewing.

- ♦ Linear Double Orderly Sewing (Function Index 040)
- ♦ Curve Double Orderly Sewing (Function Index 041)
- ♦ Arc Double Orderly Sewing (Function Index 042)
- ♦ Circle Double Orderly Sewing (Function Index 043)



(1) Display of Interface for Setting Linear Double **Orderly Sewing**

In the interface of code list, select linear double

111 (1040) orderly sewing (code 040) to have access to the interface for setting linear double orderly sewing.

② Setting of Linear Double Orderly Sewing

In the interface for setting the linear double orderly sewing, the set value of existing sewing stitch length is displayed at A; the set value of existing double sewing width is displayed at B; the set value of existing sewing speed is shown on C.

Press the button of the item, which is wanted changing, so as to activate the interface for inputting the set value. The setting methods of each item are same to that in the linear normal sewing.

The Keys D & E will determine the direction of the double sewing. Pressing Key D is to sew forward from left, while pressing Key E is to sew forward from right.



Left Double Orderly Sewing

Right Double Orderly Sewing:

After the setting (or without need to change), the coordinate input interface will be displayed as long as ENTER (F) is pressed.

③ Move Needle Position

In the coordinate input interface, user can press the



Direction Key the pointed direction

(4) Input Position

Move to the pointed position and press Point Confirmation Key (H) to have that position inputted as a shape point (passing point).

User can also input such point by repeating the operation in step 3 and step 4.





(5) End Setting of Linear Double Orderly Sewing

Press the ENTER (I) to input the set value. And the system will return to the standard interface.

The setting method of the double sewing in other shapes is same to that of the linear double orderly sewing.

The coordinate input method of sewing is same to that of the normal sewing.

Attention: In case of arc or circle, when the width is made larger than the radius of circle, Double Reverse Sewing (Function Index 046).



(2) Double Reverse Sewing (044 \sim 047)

Create the sewing so that the sewing composed at the input point and that of the offset figure could be in the reverse direction.

There are 4 kinds of double reverse sewing.

- ♦ Linear Double Reverse Sewing (Function Index 044)
- ♦ Curve Double Reverse Sewing (Function Index 045)
- $\Rightarrow \quad \text{Arc Double Reverse Sewing} \quad (\text{Function Index 046})$
- ♦ Circle Double Reverse Sewing (Function Index 047)



1 Display of Interface for Setting Linear Double Reverse Sewing

The setting method of the double reverse sewing is same to that of the linear double orderly sewing.

Difference between orderly sewing and reverse sewing



() is inputting point, and **(3)** is the last point.

Attention:In case of arc or circle double sewing, if the width of sewing is set larger than the radium of the circle, the created pattern will not be as nice as your have expected.



(3) Reverse Sewing (050 \sim 053)

Sewing of the figure composed at the input point and that which returns it reversely are created. There are four kinds of reverse sewing:

- ♦ Linear Reverse Sewing (Function Index 050)
- ♦ Curve Reverse Sewing (Function Index 051)
- \diamond Arc Reverse Sewing (Function Index 052)
- ♦ Circle Reverse Sewing (Function Index 053)

1 Display of Interface for Setting Linear Reverse Sewing

In the interface of the code list, select the linear reverse sewing (code 050) to activate the interface for setting linear reverse sewing.

② Setting of Linear Reverse Sewing

In the interface for setting the linear double reverse sewing, the set value of existing sewing stitch length is displayed at A; the set value of existing sewing speed is shown on B.

Press the button of the item, which is wanted changing, so as to activate the interface for inputting the set value. The setting methods on sewing speed and sewing length are same to that in the linear normal sewing.

After the setting (or without need to change), the coordinate input interface will be displayed as long as ENTER (C) is pressed.

③ Move Needle Position

In the coordinate input interface, user can press the

Direction Key (D) to move the needle in the pointed direction.

④ Input Position

Move to the pointed position and press Point Confirmation Key (E) to have that position inputted as a shape point (passing point).

User can also input such point by repeating the operation in step 3 and step 4.



(5) End Setting of Linear Reverse Sewing

Press the ENTER (F) to input the set value. And the system will return to the standard interface.

The setting method of the reverse sewing in other shapes is same to that of the linear reverse sewing.



(4) Order/ Reverse Multiple Sewing (048 \sim 049)

♦ Linear Order Multiple Sewing (Function Index 048)

Linear Reverse Multiple Sewing (Function Index 049)

It is quite similar to the double sewing. The only difference is that the multiple sewing has another more parameter, the Times.

1 Interface for Setting Linear Order Multiple Sewing.

In the code list, select linear order multiple sewing

(Function Code 048) . Then the interface for setting the linear order multiple sewing is displayed. The method for setting reverse multiple sewing is same as that of order multiple sewing.



1 is input point 8 is end point

② Set Linear Order Multiple Sewing

In the linear order multiple sewing interface, the button A (Stitch Length Input) is the length of current stitch form, the button B (Multiple Sewing Width) is the width of the current multiple sewing, the button C (Sewing Speed) is the current sewing speed.

Press the button for setting. Then the interface for inputting value is displayed. The setting method of input interface is same as that of linear sewing.

Sewing Direction Keys D & E are used to set the direction of the multiple sewing. Press button D to sewing the shape at left, while E at right

Left Order Multiple Sewing

Right Order Multiple Sewing;

Select button G to set the times for turnings at multiple sewing, whose Max value is 9. If this value is set at 2, the sewing will be exactly same to the linear order double sewing

When the value is set or the setting is not needed, user can press F to display the interface for inputting coordinates.



In the coordinate input interface, user can press the

Direction Key (G) to move the needle in the pointed direction.

④ Input Position

Move to the pointed position and press Point Confirmation Key (H) to have that position inputted as a shape point (passing point).

User can also input such point by repeating the operation in step 3 and step 4.

(5) End Setting of Linear Reverse Sewing

Press the ENTER (I) to input the set value. And the system will return to the standard interface.

The setting method of the reverse sewing in other shapes is same to that of the linear reverse sewing.



4-5. Mechanical Control Order

Input various kinds of control order at present point

(1) Thread-trimming (001)

The thread-trimming order can be inserted optionally into the pattern data.

(1) Selection of Thread-trimming

In the interface of code list, select thread-trimming

(Code 001) (Code 001) to activate the interface at right.

② Input of thread-trimming

In the right interface, press A to input the thread-trimming, and then the system returns to the standard interface.



(2) The 2^{nd} Origin (002)

Set the 2^{nd} origin between the origin and the start sewing point, so as to determine the needle position before the sewing start. The 2^{nd} origin can only be set in the midway of the jump feeding.

① Set the present needle position at the point 1 on the jump feed pattern.

2 Select the 2nd origin

In the interface of code list, select The 2nd Origin

(Code 002) \bigcirc to activate the interface of te right.

③ Input The 2nd Origin

In the right interface, press ENTER (A) to input the 2ns origin, and then the system will return to the standard interface.

Explanation:After user sets the point 3 at the following picture as the 2^{nd} origin, the feed will stop at 3 after jump feed of $1 \rightarrow 2 \rightarrow 3$, then the sewing machine will perform the cycle operation from 3 to 9.





Attention: In the case of scaling, the path from the origin to the 2nd origin can't be scaled.

(3) Stop in Midway (003)

Input order to stop machine in midway.

① Select the Stop in Midway

In the interface of code list, select the Stop in

Midway (code 003) 2003 to activate the interface at right.

② Select Stop Status

The Presser Status Key (B) will display the status of presser at stop.



Up Position at Stop

Down Position at Stop

The Needle Position Key (C) will display the needle position at stop



Highest Position



Up Position

Down Position

When user select the status, please press button \boldsymbol{B} and \boldsymbol{C}

③ Input Stop in Midway

In the right interface, press A to stop inputting the set content, and then the system will return to the standard interface.

Attention:

For stop after trimming, please input in the procedures in Thread-trimming and Stop.


(4) Running for A Circle (006)

Input the order to let machine run for a circle.

(1) Select Running for A Circle

In the interface of the code list, select Running for A

Circle (Code 006) to activate the interface at right.

② Input Running for A Circle

In the interface at right, press ENTER to confirm the sewing machine for running a circle, and then the system will return to the standard interface.



(5) Tension of the 3rd Thread (007)

Input tension of the 3rd thread.

(1) Select Tension of the 3rd Thread

In the interface of the code list, select the Tension of

the 3rd Thread (Code 007) **2007** to activate the right interface.

② Input Tension of the 3rd Thread

In the right interface, press ENTER to input the tension of the 3rd thread, and then the system will return to the standard interface.



(6) Delay(010)

To set the external output time.

1 Select Delay

010)

In the interface of the code list, select delay (Code

to activate the interface at right.

② Input the Delay Value

In the right interface, input the delay value with the

figure keys (A) or +/- Keys (B). Press to input the value and then the system will return to the standard interface.



(7) Scale the Reference Point (004)

Enable to scale the reference points at any position on the produced pattern. When not setting the scale of reference point, user can scale the origin.

1 Select Scale the Reference Point

In the interface of code list, select Scale the Reference Point (code 004) 004 to activate the interface at right.

② Set Scale of Reference Point

In the right interface, press to input the scale of reference point, and then the system will return to the standard interface.

1. If user input the scale of Reference Point for twice, the last input will take precedence.

2. When performing this function, user can set the present needle position at the reference position which is set in advance.

If user scales the pattern at loading, the pattern will be scaled according to the set reference point. Additionally, the pattern will be scaled according to the scaled reference point at sewing.





(8) Mirror Point (005)

Only after setting the mirror state to the Random Reversal in the setting of press turn ("9-22. Presser Turns Setting" p.93), can the mirror point be inputted.

(1) Select Mirror Point

In the interface of the code list, select mirror point

(Code 005) (Code 005) to activate the interface in right.

2 Set Mirror Point

In the right interface, press and input the mirror point at the present needle position, then the system will return to the standard interface.

After user inputs mirror point in the Position 5 of the picture below, the system will perform the jump feed from origin to position 3, and then carry out the linear sewing in order of $3\rightarrow 4\rightarrow 5$ (reversal) $\rightarrow 6\rightarrow 7\rightarrow 3$.

Attention:

1. The mirror clamp of the start sewing is at left, therefore the mirror order in later shall be the repetition of right and left. By the way, the number of the inputted mirror order shall be odd number. If it is inputted at even number, the clamp may crash to the needle at the finish, thus may cause the breakage of needle.

2. No mirror point can be set in the following positions:

- (a) The first position after the 2^{nd} origin.
- (b) The first position after thread-trimming





(9) Setting of Upper Thread Tension (014)

Set the value of the upper thread tension. This value will keep valid until there is a position for the next thread tension setting order.

① Select Upper Thread Tension Setting

In the interface of code list, select upper thread

tension setting (Code 014) **014** to activate the right interface.

② Set Value for Upper Thread Tension

In the right interface, set the upper thread tension value by pressing number keys or +/- keys. After

is pressed, the set upper thread tension value is inputted and the system returns to the standard interface.

The value actually inputted as order:

Upper thread tension (No.014) =

Upper thread tension basic value (No.113) + the inputted value (Adjusted value).

If the basic value of the upper thread tension (No.113) is at $\lceil 50 \rfloor$, and the upper thread tension (No.014) is at $\lceil 100 \rfloor$, the inputted value (adjusted value) is $\lceil 50 \rfloor$.

(10) Setting of Intermediate Presser Height (018)

Set the intermediate presser height. This value will be kept valid until there is a position for the next intermediate presser height setting order.



1 Select the Intermediate Presser Height Setting

In the interface of code list, select Intermediate

Presser Height Setting (Code 018) 018 to activate the interface in right.

② Setting of the Intermediate Presser Height

In the right interface, use number keys or +/- keys

to set height of intermediate presser. After is pressed, the height of intermediate presser is inputted and the system return to the standard interface.

When the presser at its lowering position, user can press +/- keys (B) to make the presser reach the inputted height.

The value actually inputted as order:

Intermediate presser height setting value (No.018) = Basic value of intermediate presser height (No.115) + inputted value (adjusted value).

1. if the basic value(No.115) is set at $\lceil 1.0mm \rfloor$, and the height (No.018) is set at $\lceil 3.0mm \rfloor$, the inputted value (adjusted value) shall be $\lceil 2.0mm \rfloor$.

2. The maximum of inputted value is 7mm, but it is under the limitation of the actual setting of machine.

(11) Sewing Machine Stop (019)

Input the order to stop sewing machine.

1 Select Sewing Machine Stop

Select the Sewing Machine Stop activate he interface like right.

<u>№</u> 019

② Point Stop Status

Select the needle position at stop from the area A, the selected key will be displayed in dark.

③ Input the Sewing Machine Stop Order

In the right interface, press ENTER to input the order of sewing machine stop. And then the system will return to the standard interface

<u> </u>	Stop position at the highest position			
<u></u>	Needle at up position when machine stops			
<u>@</u> _J_	Needle at down position when machine stops			

Attention:UP position error will be produced at the time of sewing when the needle position is set to DOWN position at the





end of sewing or before jump feed. Needle stop is become invalid when the sewing machine is in the stop state, and the needle position does not change.

(12) Deletion of Mechanical Control Order (059)

Delete the mechanical control orders on the present position, such as 2nd origin, stop at midway, thread-trimming, upper thread tension setting value and intermediate presser height setting.

(1) Select the Deletion of Mechanical Control Order

In the interface of the code list, user shall press Deletion of Mechanical Control Order (Code 059059

to activate the interface at right

2 Delete the Mechanical Control Order

In the right interface, press to delete the mechanical control order. And then the system will return to the standard interface.



(13) Sewing Speed (092)

Input sewing speed.

(1) Select Sewing Speed

In the interface of the code list, select the Sewing

Speed (code 092) to activate the interface in right.

② Set Sewing Speed

In the right interface, set the sewing speed with the number Keys A or +/- Key B. After user

, the set value will be inputted to the presses sewing speed column, and then the system will return to the standard interface.



4-6. Automatic Back-tack (064)

Back-tack of Z type or V type with the specified number of stitches is created such as the sewing start, the sewing end, or the both of the elements including the present point.

① Select the Automatic Back-tack

In the interface of code list, select the Automatic Back-tack (code 064) **1064** to activate the interface for setting the automatic back-tack.

064 Back-Tack

2 Setting of Automatic Back-tack

In the interface for setting the automatic back-tack, the set stitch number of sewing start is displayed on Key A, while the set stitch number of sewing end is displayed on Key B.

Press the button of the item, which is wanted changing, so as to activate the interface for inputting the set value. In the interface for setting stitch number, user can use number Keys (F) or +/-Keys (G) to set the set the stitch number. Press ENTER (H) to input the set stitch number and then the system will return to the interface for setting automatic back-tack

By using the Selection Key (C&D), user can determine the type of the back-tack. The selected type will be displayed in dark. Among these two keys, the Key C is for V type back-tack, while Key D for Z type back-tack

After the setting (or without need to change), the standard interface will be displayed and the back-tack will be edited as long as ENTER (E) is pressed



4-7. Condensation Sewing (065)

The specified number of stitches of the sewing start, sewing end, or the both of the element including the present point is changed to the specified pitch.

① Selection of Condensation Sewing

In the interface of the code list, select condensation

sewing (Code 065) to activate the interface for setting the condensation sewing.

② Setting of the Condensation Sewing

In the interface for setting the condensation sewing, the set stitch number of sewing start is displayed on Key A; the set stitch number of sewing end is displayed on Key B; the set pitch of stitch form is displayed on Key C.

Press the button of the item, which is wanted changing, so as to activate the interface for inputting the set value. In the interface for inputting, user can use number Keys (E) or +/-Keys (F) to set the set the value. Press ENTER (G) to input the set value and then the system will return to the interface for setting condensation sewing.

If the stitch number is set at 0, that part can be set as without condensation sewing

After the setting (or without need to change), the standard interface will be displayed and the condensation sewing will be edited as long as ENTER (D) is pressed.





4-8. Overlapped Sewing (066)

According to the needle entry position, insert the point sewing data among the present data.

① Select Overlapped Sewing

In the interface of code list, select Overlapped $\frac{1}{660}$

Sewing (Code 066) to activate the interface for setting the overlapped sewing.

(2) Setting of Overlapped Sewing

With the Backward Key (A) and Forward Key (B), user can track the needle entry point. The present needle position is displayed in red; after pressing Key C, user can set that point as the target of the overlapped sewing, which is displayed in red. Press ENTER (D) to set that point as the element of the overlapped sewing, and the system will return to the standard interface.

The overlapped sewing is usually used at the end of a close pattern. For an example, the right graph is a close circle, user shall press backward key (A) to fall back to the stitch position needing overlapped and perform the setting operation.



4-9. About Angle Point (Curve Sewing & Normal Sewing)

Angle point, the point overlapped by two shaping pints in the curve sewing, stands for the end of a curve. In the input of curve, user can determine an angle point by pressing Key C and Key B.

① Input Angle Point in the Curve Normal Sewing

In the interface of code list, select curve normal

sewing (Code 024) to input the coordinate of the curve normal sewing.

Use Key A to input the points 1, 2 and 4; use Key B to input points 3 & 5; use Key C to input point 5. Then the points 3 & 5 are becoming the angle points, and the Key D shall be set at +2.

The result is the picture below. On point 3, which has been inputted as angle point, once the curve is finished, the connection between point 3 and point 5 will turn to new curve (in element level, it's a curve sewing).





② Input Angle Point in Normal Sewing

At normal sewing, the inputted points are determined by the element type before the point which is under the operation of Key B



Select normal sewing (code 022) ; in coordinate input interface, use Key B to input points 1, 2, 5, and 7, use Key A to input point 3, 4 and 6. At this moment, the point 2 is the normal deciding point (number of shape points +1) since the point that one before point 2 is the linear sewing. And the point 5 &7 are the angle points (number of shape point +2), since the point before the point 5 & 7 is the curve sewing.



③ Correct Shape Point at Angle Point

The angle point overlaps 2 shape points; therefore user needs to pay attention when correcting the shape point ("5-8. Correction of Shape Point"p.73)

Select Shape Point Move (Code 136) and then choose the shape point for moving. Press Forward Key D to have access to the selected shape point. After that, angle point (R Point) has two shape points.

After making R point move to S point, user can select the shape point rear 2 or front 3 so as to change the result.

The result when rear 2 is moved







The result when front 3 is moved



Move the rear 2 and front 3 to a same coordinate. At this time, user can move Point R.



When deleting either rear point 2 or front point 3, the angle point becomes the normal passing point and the pattern become the curve sewing.





5. Correction of Pattern

When you perform the correction of pattern, please use or to move the needle to the position for correction.

5-1. Point Correction

(1) Point Deletion (070, 074)

The pointed section pattern data is deleted in needle entry point unit. The method of point deletion is divided into Relative Point Deletion and the Absolute Point Deletion according to the movement of the pattern data after the point deletion

The function of point deletion can not only delete the pattern data that is produced with the point sewing functions, but also can delete the data produced with the linear sewing functions.

(1) Select the Relative Point Deletion

In the interface of code list, select and perform the

Relative Point Deletion (code 070)

② Appoint the Range for Relative Point Deletion

Press Key B or C to move the needle, so as to determine the range of the point deletion. Then

press (D) to activate the confirmation interface of the point change.

③ Confirmation of Point Change

The confirmation interface of point change is activated when it changes to point sewing. If user

continues performing it and press, the point deletion confirmation interface will be displayed.

(4) Explanation of Relative Point Deletion and Absolute Point Deletion

In case of the relative point deletion, the whole pattern data after the deleted point moves while holding the relation before deletion.



[M-110] Delete the sewing point	×
Press enter button to perform operation,press exit button to cancle operation	

Absolute Point Deletion (Code 074) 074. The pattern data after the deleted point does not move.



Attention:

1. After the point deletion, the point pitch shall not exceeds the max sewing stitch form of the sewing machine

2. The result of point deletion may exceed the sewing range as a part of the completed pattern data. So, at this time, please use the correction function to modify the pattern data to the sewing range.



(2) Point Move(071, 075)

This function moves the specified needle entry point. There are two methods of Relative Point Move (071) and Absolute Point Move (075), depending on moving of the pattern data after the moved point.

Point Move can not only move the pattern data made via the point sewing input function, but also can move the pattern data which is produced with the linear sewing functions. For pattern data make by linear sewing, it can be changed into point sewing after performing the point move.

(1) Selection of Relative Point Move

In the interface of code list, select and perform 071 relative point move (code 071)

② Specify the Position of Relative Point Move



Use direction keys (B) to specify the

position of the point move. Press (C) to activate the confirmation interface of the point change.

③ Confirmation of Point Change

The point change confirmation interface shows that the point change may be changed to the point sewing. In case

of continuing, press to perform the point move, and then the system returns the standard interface.

In case of the relative point move, the whole pattern data after the moved point moves while holding the previous relation.







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F1 F2	F3 F4 EN
	((())

In case of the absolute point move (code

075) 075, the pattern data after the moved point does not move.



Attention:

1. After the point move, the point pitch shall not exceeds the max sewing stitch form of the sewing machine

2. The result of point move may exceed the sewing range as a part of the completed pattern data. So, at this time, please use the correction function to modify the pattern data to the sewing range.



(3) Point Adding (076)

Add point after the pointed needle entry point. The pattern data after the added point keeps still. The point adding can not only add the inputted pattern data, but also can add the data made by linear sewing and other functions.

1 Selection of Relative Point Adding

In the interface of code list, select and perform the

relative point adding (Code 076)

② Specify the Position of Absolute Point Move

Use (B) to sp

(B) to specify the position of the

point move Press (A) to activate the confirmation interface of the point change.





③ Performance of Adding absolute Point

In the confirmation interface of absolute point,

press to perform the point adding. And then the system returns to the standard interface.



Attention:

1. After the point adding, the point pitch shall not exceeds the max sewing stitch form of the sewing machine

2. The result of point adding may exceed the sewing range as a part of the completed pattern data. So, at this time, please use the correction function to modify the pattern data to the sewing range

5-2. Correction of Top Point

(1) Deletion of Top Point (072, 077)

Delete a top point in the pointed pattern data. Depending on whether the pattern data after the point deletion keep still, the methods of top point deletion are divided into two methods: Relative Top Point Deletion and Absolution Top Point Deletion.

If the point of the final needle entry point or the needle entry point except the top point, this operation will be denied.

① Selection of Relative Top Point Deletion

In the interface of code list, select the relative top

point deletion (Code 072) to activate the confirmation interface of the relative top point.

② Performance of Relative Top Point Deletion

In the confirmation interface of relative top point, press ENTER Key A to perform the relative top point deletion, then the system returns to the standard interface



When deleting relative top point, the whole pattern data after the deleted point moves while holding the previous relation before deletion.



In case of deleting the absolute top point: in the interface of code list, select and perform the absolute

top point deletion (code 077) . At this time the pattern data after deleted point keep still.

(2) Top Point Move (073, 078)

Move the pointed needle entry point. Depending on whether the pattern data after the point move keep still, the methods of top point move are divided into two methods: Relative Top Point Move and Absolution Top Point Move.

Relative Top Point Move: The pointed point cannot be moved at the needle entry point other than top point.

Absolution Top Point Move: If the pointed point is the final needle entry point or the needle entry point other than the top point, this operation will be denied.

Press er exit b <u>ut</u>	nter button ton to ca <u>ncl</u>	to perfori le oper <u>atio</u>	m operati on	on,press	

Attention:

The result of point deletion may exceed the sewing range as a part of the completed pattern data. So, at this time, please use the correction function to modify the pattern data to the sewing range.

① Selection of Relative Top Point Move

In the interface of code list, select and perform the

Relative Top Point Move (Code 073)

② Specify the position of Relative Top Point Move

In the specified interface of relative top point move,



use (B) to move the point. Press ENTER (C) to activate the confirmation interface of mechanical control order deletion.

③ Performance of Top Point Move

In the confirmation interface of mechanical control order deletion, press ENTER to perform the top point move, and then the system will return to the standard interface.



Relative vertex move

When moving relative top point, the whole pattern data after the moved point moves while holding the previous relation before that movement



Absolute vertex move

In case of moving the absolute top point: in the interface of code list, select and perform the absolute top point move (code 078). At this time the pattern data after moved point keep still

Attention:The result of point deletion may exceed the sewing range as a part of the completed pattern data. So, at this time, please use the correction function to modify the pattern data to the sewing range



5-3. Element Deletion (063)

Delete the sewing elements and mechanical orders in the unit of element, the element after the deleted element will move forward after the deletion.

(1) Display of Element Deletion Performance Interface

Press element deletion key (A) in the standard interface, or select element deletion (code 063) in the interface of code list to activate the interface of the element deletion performance

(2) Performance of Element Deletion



Select the Element Deletion (Code 063) then Press ENTER B to perform the element deletion. After that the system will return to the standard interface.

If the element belonging to the present needle position is deleted, the pattern data after the deleted element will move forward in a whole, and the needle position is moved to the end of the element before the deleted one.





5-4. Sewing Speed Section Change (061)

① Display of Interface for Setting the Sewing Speed Section Change

Press Sewing Speed Section Change Key in the standard interface, or select the Sewing Speed

Section Change (code 061) in the code list to activate the interface for setting the Sewing Speed Section Change.

② Input the Changed Speed

This is the interface for setting sewing speed section change. User can use number keys (A), +/- Keys (B) to set the changed speed. Press ENTER (C) to display the interface for specifying the sewing speed change range.



③ Specify the Range of Speed Change

Press Backward Key D or Forward Key E to track the needle entry point. Press ENTER (F) to change the point speed of the set range. Then the system will return to the standard interface.



5-5. Change Length of Pitch (062)

For the made element, the sewing pitch length of a specified element can be changed.

1 Display of Interface for Setting the Pitch Length

In the interface of code list, select change pitch length

(code 062) (code 062) to activate the interface for setting the pitch length.

② In put the Pitch Length

In the interface of changing pitch length, use number keys (A), +/- Keys (B) to set the changed pitch length. Press ENTER (C) to display the interface for specifying the pitch length change range.

③ Specify the Range of Pitch Length for Changing

Press Backward Key D or Forward Key E to track the needle entry point. Press ENTER (F) to change the pitch length of the set range. Then the system will return to the standard interface.



5-6. Symmetry

Make a pattern symmetrical to the made one. This function is effective to the whole pattern with the existing needle position at the standard. When operating this function, user shall set the existing needle position to the standard position.

(1) X Axis Symmetry (082)

Create the pattern symmetrical to the X axis passing the present needle position. The present pattern is kept, and the symmetrical pattern is added after it.

(1) Performance of X Axis Symmetry

In the interface of code list, select the X Axis Symmetry (code 082) VOZ to activate the confirmation interface. Press ENTER A in confirmation interface to perform the X axis symmetry.



(2) Y Axis Symmetry (083)

Create the pattern symmetrical to the Y axis passing the present needle position. The present pattern is kept, and the symmetrical pattern is added after it.

(2) Performance of Y Axis Symmetry

In the interface of code list, select the Y Axis Symmetry (code 083) **1083** to activate the confirmation interface. Press ENTER A in confirmation interface to perform the Y axis symmetry.



(3) Point Symmetry (084)

Create the pattern symmetrical to the present needle position. The present pattern is kept, and the created symmetrical pattern will be added after it.

③ Performance of Point Symmetry

In the interface of code list, select the Point Symmetry (code 084) 084 to activate the confirmation interface. Press ENTER in confirmation interface to perform the point symmetry.



(4) Y Symmetry Pattern Inversion Orderly Sewing (098)

Create the pattern symmetrical to the Y axis passing the present needle position. The present pattern is deleted, and the jump feed is added up to the top of the symmetrical pattern.

④ Performance of Y Symmetry Pattern Inversion Orderly Sewing

In the interface of code list, select the Y Symmetry Pattern Inversion Orderly Sewing (code 098) and press ENTER at confirmation interface to perform the Y Symmetry Pattern Inversion Orderly Sewing.



5-7. Correction of Shape Point

Perform the correction on the shape point of element that contains the present point.

(1)Shape Point Adding (135)

Add shape point.

1 Selection of Shape Point Adding

In the interface of code list, select shape point adding

(code 135) **135** to activate the confirmation interface of the presser move.

Press ENTER A to move the presser to the first shape point. At this moment, the specifying interface of the shape point is displayed.



2 Specify the Shape Point

Use Backward Key B and Forward Key C to specify the position for adding shape point. The new shape point will be added after the shape point specified here. The specified shape point is in red (I).

Select the shape point, press ENTER(D) to activate the interface for specifying the shape point position.



③ Specify the Adding Position



Use direction key (E) to move icon (J) for specifying the symmetrical position of the added shape point. And then press ENTER (F) for confirmation.



④ Delete the Mechanical Control Order

The confirmation interface is displayed, therefore, if the mechanical control order in the midway of the element can be deleted, the shape point adding will be performed after the ENTER (G) is pressed. After that operation, the system will return to the standard interface.

The picture below is the example of adding shape point J after shape point I





(2) Shape Point Move (136)

Move shape point.

(1) Selection of Shape Point Move

In the interface of code list, select and perform Shape

Point Move (code 136)

The operational procedure for shape point move is same to that in "5-7. (1) Shape Point Adding" p.73. After the confirmation of presser move, user shall select the shape point for moving, and specify the position of moving destination in the position specifying interface. After specifying the position and confirming the mechanical control order, the shape point move is performed

The following picture is the example to move shape to point B.



(3) Shape Point Deletion (137)

Delete the shape point.



① Selection of the Shape Point Deletion

Correction of Patter

In the interface of code list, select Shape Point

Deletion (code 137) **137** to avtivate the confirmation interface of presser move

Press ENTER (A) to move the presser. After that, the shape specifying interface is displayed.

01 137 +**11.30** -0.90 **S** 3200 + Y 11.40 1 Y 0.20 D G 11.50 11.50 ~~ Y 11.50 11 50 С В ((())) 9



② Specify the Shape Point

Use Backward Key (B) and Forward Key (C) to specify the shape point for deletion.

Select the shape point and press ENTER (D).

③ Delete the Mechanical Control Order

The confirmation interface is displayed. Therefore, if the mechanical control order in the midway of the element can be deleted; please press ENTER (E).



④ Performance of Shape Point Deletion

In the confirmation interface of Shape Point Deletion, please press ENTER F to perform the deletion of the shape point. After that, the system returns to the standard interface.

The following picture is the example that has shape point G deleted.



6. Pattern Operation

6-1. Copy Pattern (086)

Enable to copy 10 created patterns at most.

(1) Select Pattern Copy

In the interface of code list, select Pattern Copy (code 086) to activate the interface for specifying the pattern copy position.

② Specify the Target for Pattern Copy



Use (A) to adjust the icon to the position where user want the pattern to be copied.

③ Decide the Copy Position of Pattern

Press Key B to set that point as copy position.

④ Perform the Pattern Copy

Press the ENTER (D) to activate the interface for confirmation.

(5) In the confirmation interface of pattern copy, user

can press to copy the pattern and let the system return to the standard interface

1. The operations of step 2 and 3 can be repeated for 10 times at most. The number of pieces inputted will be displayed on E.

2. When performing the operation of step 4, user can press Key C to delete the inputted copy point before ENTER is pressed.

3. This function is to copy the whole pattern with the present needle position as the reference. The jump feed shall be inserted before the swing start of the copied pattern.

Attention:

If the present point is the jump feed point before the sewing start, the copy operation will be denied.







6-2. Pattern Move (085)

Parallel movement of the created pattern

Move the pattern from the existing position to the target position.

(1) Move to the Reference Position

In the standard interface, use Forward Key and Backspace Key to move the present point to the reference position that is wanted.

② Select the Pattern Move

In the interface of code list, select pattern move (code 085) to activate the interface for specifying the position of pattern move.

③ Specify the Position of Pattern Move



Use (A) to move the pointed move position to the wishes position.

④ Performance of Pattern Move

Press ENTER (B) to activate the confirmation interface

⑤ In the confirmation interface of pattern move,

user can press **to** move the pattern and let the system return to the standard interface.

1. This function is to move the whole pattern with the present needle position as the reference. The jump feed data shall be inserted before the swing start of the moved pattern



2. When the present point is at the origin, this function is unavailable.

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Press enter exit button	button to p to cancle op	erform op peration	eration,pr	ess	
					Ĩ



6-3. Pattern Deletion (087)

Delete the entire created pattern data.

(1) Select the Pattern Deletion

In the interface of code list, select the pattern deletion (code 087) to activate the confirmation interface of pattern deletion.

(2) Performance of Pattern Deletion

Press to perform the pattern deletion, and then the system returns to the standard interface. The entire inputted pattern data will be deleted. The feed needle point will also be move and the needle position return to the origin.

Attention:

1. The deleted pattern data can't be recovered.

2. When you have downloaded pattern data to U disk for remaking the new patterns, or loaded other data from U disk, please use this function to delete the pattern data temporarily

When loading pattern without delete the pattern, the pattern will be added after the present needle position of the created pattern.

6-4. Pattern Load

Load the pattern data.



(1) Load Pattern Data

(1) Select Load Pattern

to activate the In the standard interface, press interface of pattern load.

2 Select the Pattern for Loading

The existed pattern number will be shown at area A. Select the wanted number (the selected will be displayed in dark). When there are more than 20 patterns in storage, the Page Key will be displayed. Press that key to change the pattern shown at Area A.

Instruction:

1 、 Press Pattern Information Key (F) to activate the

preview interface of pattern. Press to return to the pattern load interface.

2, press Key E to select whether to delete the jump feed up to the sewing at the time of pattern data reading. The present setting statue is displayed on the jump feed load key. And the setting is changed over alternately at each pressing.



jump feed load

jump feed cancellation

③ Specify Direct Pattern Number

Select Pattern Number Specifying Key (C) to activate the interface for specifying the pattern number. Use Number Keys (H) or +/- Keys (I) to input the pattern number. Press +/- to input the pattern number next to the pattern being inputted right now.

Press ENTER (J) to return the load interface under the status that the inputted pattern number is selected.

④ Performance of the Pattern Load

Press ENTER (D) to load the selected pattern data and the system returns to the standard interface.

(2) Set the Scaling Rate





Set the scaling rate in advance, so as to load the scaled patterns.

1 Set the Scaling Rate in X Axis

Press X Scaling Rate Setting Key A to display the interface for setting the Scaling Rate in X axis

The set value of the existing X scaling rate is displayed on that key.

② Input the X Scaling Rate

Use number keys (D) or +/- keys (E) to input the scaling rate. The step of change is 0.01% at each pressing on +/- keys

Press ENTER (F) to confirm the inputted value, and then the system return to the pattern load interface.



③ Set the Scaling Rate in Y Axis

Press Y Scaling Rate Setting Key B to display the interface for setting the Scaling Rate in Y axis

The set value of the existing Y scaling rate is displayed on that key..

④ Method for Setting the Scale

For the method of scale, either stitch length increase/decrease or number of stitches increase/decrease can be selected

The present setting status is displayed on the method f selection Key (C). When button C is pressed, the figure on it will be altered.

On method selection key, the scale method selected at present is displayed.

:Increase or decrease the stitch number

:Increase or decrease of stitch form length

1. At point sewing, after setting the increase or decrease of the stitch number, the sewing stitch form length will also be scaled

2. After scaling rate is set on circle, arc or the scaling in x/y is repeated, the original shape of pattern may be unable to be remained due to the sewing is changed to point sewing. The reason of it is that the



stitch number is changed

6-5. Pattern Input

Input the pattern data.

(1) Input Pattern Data

(1) Select the Pattern Writing

In the standard interface, press pattern input interface.





② Specify the Pattern Number

Use Number keys (A) or +/- Keys (B) to specify the pattern number for input. Press +/- Key, the empty number will be displayed in order.



③ Perform the Pattern Input

Press ENTER C to input the pattern data created in the inputted number, then the system returns the standard interface.

If the pattern data with the specified pattern number is existed, the interface for confirming the



to

Press media selection key (D) to activate the interface for setting the media. At this moment, you can select the media as the input target.



If there is no jump feed order before the pattern end or the jump feed, pressing ENTER C will activate the confirmation interface of the

auto-trimming. Press

ing. Press **F** to select the

insertion for thread-threading or press for not trimming.

Select either a key in above to perform the pattern input.



7. Initialize (090) U Disk

Initialize the U disk.

1 Display of Interface for U Disk Initialization

In the interface of code list, select Initialization (Code

090) to display the interface of initialization.



Insert the U disk that needs initializing to the U disk

slot. Then press **control** to start the initialization.

After the initialization, the system will return to the standard interface.

Attention:

After the initialization, the entire data in the U disk will be deleted. And it is impossible to recover to the former status.





8. Trial Sewing

Use the loaded data or the input function to sew the pattern in trial or to confirm the shape.

1 Display of Trial Sewing Interface

In the standard interface, press to activate the interface of trial sewing preparation

In section C, the pattern range in X and Y directions are displayed.

② Display of the Interface for Trial Sewing

Press Ready Key (D) to activate the interface for trial sewing.



③ Preparation of the Trial Sewing

(a) Press Threading Button (A) to display the threading interface

Press interface

to return to the trial sewing preparation
(b) Press Thread-winding Key (B) to display the interface of thread-winding

Press the pedal to start the sewing machine, and

machine begins to wind the thread. Press to stop the sewing machine. And then the system returns to the trial sewing preparation interface.

For thread-winding, the operation of winding thread

will be unavailable, unless **main** is pressed.

In the case where the thread trimming order doesn't exist in the end of pattern and before jump feed, the confirmation interface of the automatic thread-trimming insertion is displayed

after pressing Ready Key. Press

to insert

or

the thread-trimming, while press to deny the insertion. The inputted data will replace the present pattern data of sewing machine.

When either key is pressed (no matter

), the trial sewing preparation interface will be displayed.



④ Performance of the Trial Sewing

To perform the trial sewing by using the ordinary operation of sewing machine and stepping on the pedal. In Section Q, the range of X and Y direction is displayed.

⑤ Performance of Setting the Trial Sewing

(a) The sewing speed is displayed at section O. By using the Speed Adjustment P, the user can adjust the speed.

(b) Press R to let the presser back to the position of sewing start.

(C) Press Single Step Trial Sewing Key (S) to have access to the interface of the presser adjustment.





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(6) Confirmation of the Pattern Shape

Press Single Step Trial Sewing Key (S) to display the confirmation interface of the shape. Step the pedal to lower the presser, then press Forward /Backward Keys U to move the needle position.

Press Automatic Move Stop Key (V) to stop the automatic move.

In Section W, the stitch number form the sewing start point is displayed.

Press Return To Origin Key (X) to move from the present needle position to the sewing start point, and the system will return to the trial sewing interface.

⑦ Return to Trial Sewing Preparation Interface

Press Ready Key to return to the Trial Sewing Preparation Interface.

9. Setting Function

9-1. Presser Inversion Setting (091)

Set the inversion of presser.

1 Display of Interface for Setting Inversion

In the interface of code list, select the Inversion

to activate the Setting (Code 091) interface of inversion setting.

2 Select the Method for Inversion

About the action of the presser inversion, user can select the automatic inversion or the random inversion. The selected key will be displayed in dark.

(C) to set the selection as ef Press

Attention:

The setting of the presser inversion can only be accessible when there is no pattern inputted.



9-2. Set the Reference Value of Upper Thread Tension (113)

Set the reference value of upper thread tension.

(1) Display of the Interface for Setting the Reference Value of Upper Thread Tension

In the interface of code list, select the Reference Value of Upper Thread Tension (code 113)

a <u>113</u>

to display the interface for setting the reference value of upper thread tension.

2 Set the Reference Value of Upper Thread Tension

In the interface for setting the reference value of upper thread tension, user can use number key A to input the figure directly or use +/- Keys to change the value.

Press ENTER (C) to confirm the set value and the system will return to the standard interface.

Attention:

After changing the reference value of upper thread tension, the whole tension of the pattern is changed.



9-3. Set the Reference Value of Intermediate Presser Height (115)

Set the reference value of intermediate presser height.

① Display of the Interface for Setting the Reference Value of Intermediate Presser Height

In the interface of code list, select the Reference Value of Intermediate Presser Height (code

115) 115 to activate the interface for setting the reference value of intermediate presser height.

② Set the Reference Value of Intermediate Presser Height

In the interface for Setting the Reference Value of Intermediate Presser Height, user can use number key A to input the figure directly or use +/- Keys to change the value.

Press (C) to confirm the set value and the system will return to the standard interface.

After changing the reference value of intermediate presser height, the intermediate presser height of the entire presser will be changed.



10. Select Ending Method (110)

Set the tracking at the end of the input.

1 Display Interface for Selecting the End Method

In the interface of code list, select the ending method

selection (code 110) to activate the interface for selecting the end method.

② Select the Ending Method

When the pattern input is finished, select return to needle entry point of sewing element in each single stitch one by one (As shown in A) or the Ending (B). The selected is shown in dark. Press ENTER (C) to confirm the selection, and then the system will return to the standard interface.



11. Allocate Functions to F1~F5 Keys (112)

① Allocate the functions to the F keys, the initial display interface is shown as below:



<Initial Display Interface>



② Display Interface of Function Selection/Setting

In the interface of code list, select Function

Selection/Setting (Code 112) to activate the interface of function selection/setting interface.

③ Select the Key for Allocating the Functions

Press the wanted keys among **F1** to activate the interface of Code List (B).

④ Select the Functions for Allocation

Select the function code, which is wanted allocating to the F keys, in the code list; or press the Code Input Key (D) and input the code in the code input interface. Press the Page Key E to change the displayed code list.

Select the function and press ENTER (F) to return to the interface of function selection/setting.



The F keys holding the allocated function will show their functions (along with code) at G section.

At this time, to assign the function to the next F keys after pressing $F1_{\sim}$ $F5_{\sim}$

Press Key (I) to return to the standard interface.



6 Use F Key

The F keys that have been allocated with functions will be display its assigned function like Key J. Press that key, the assigned function can be performed directly.



12. Display of Detail Information on Set Value (093)

Confirm the set content of the pattern data.

(1) Display of the Setting Value Reference

In the interface of code list, select the Setting Value

Reference (code 093) to display the interface of the Setting Value Reference

Press Key A to return to the standard interface.



Number	Content	Display
1	Total Stitch Number	0 U VIZ.9
2	Inversion Setting	Automatic inversion Random Inversion
3	X Enlargement Rate	
4	Y Enlargement Rate	
5	Scaled Reference Point Coordinate X Axis	

Contents in Setting Value Reference Interface

6	Scaled Reference Point Coordinate Y Axis	0.00
7	Track Setting	Tracking No Tracking
8	Version	1.0-170

13. Display of Detail Information on Present Needle Position

Confirm the detailed information of the present needle position.

1 Display of Interface for Showing Pattern Content

In the standard interface, press Pattern Content Display Key to activate the interface for showing the detailed information of pattern content.

Press Key A to return to the standard interface



Contents in Pattern Content Display Interface

No.	Content	Display
1	Display on the type of needle entry at present needle position	pattern Midway of Pattern Top Point End of Element End of Pattern Start of
2	Absolute coordinate of present needle position	¥ 188 ←↓
3	The elements pitch including the present needle position.	2.0 mm ↓‡
4	The thread tension at present needle position (absolute value, relative value)	AES 100
		The actual actions of sewing machine turn to the value of ABS. Because the inputting orders of the reference value and the set value might be displayed as "-", the action of sewing machine at this time is "0".

Display of Detail Information on Present Needle Position

1900G Pattern-designing Instructions for Touch Panel

5	Display the element type at the present needle position. In case of the mechanical control order the type of order will be displayed.	Image: Solution feedImage: Solution feedImage: Solution feedImage: Solution feedImage: Solution feedImage: Solution feedPoint SewingPolygonalArcCircleImage: Solution feedImage: Solution feed </th
		Curve Mechanical Control Order (i.e.:Thread Tension)
6	Display the relative coordinate of the present needle position	
7	Display of the sewing speed or the jump speed at the present needle position	2700 rpm 400 mm/s 271 271 Sewing Speed Jump Feed Speed
8	Display of the intermediate presser height at the present needle position	The actual actions of sewing machine turn to the value of ABS. Because the inputting orders of the reference value and the set value might be displayed as "-", the action of sewing machine at this time is "0".

14. Settings of Display

Set the interface display.

① Show the Interface for Setting the Display

In the standard interface, press to activate the interface for setting the display.

Press Key A or Key B to have access to the interface for setting the display method. The setting contents selected by now are displayed on the keys.

Press to return to the standard interface.



② Zoom Setting

In the interface of display setting, press Zoom Setting Key A to have the Zoom Setting interface displayed. Select the magnification that you want from the Zoom Amount Key C. the selected key is displaced in Dark. Press ENTER (D) to return to the interface of the display setting.



③ Setting of Needle Entry Point Display

In the display setting interface, press Needle Entry point Display Setting Key B to activate the interface for setting the display of needle entry point. In this interface, user can select Key E (Display the needle entry point) or Key F (Don't display the needle entry point). After pressing ENTER (G), the system will return to the interface displaying the content for setting screen. 1900G Pattern-designing Instructions for Touch Panel



15. Element Forward · Element Backward (130、131)

Move the needle position forward or backward in the unit of element.

(1)**Selection of Element Forward**

In the interface of code list, select Element Forward (Code 130) to move the needle position to the end position of the element containing the present needle position. When the present needle position is the end position of the element, the needle position will be moved to the end position of the next element.

(2)**Selection of Element Backward**

In the interface of code list, select Element Backward (Code 131) 2 to move the needle position to the start position of the element containing the present needle position. When the present needle position is the start position of the element, the needle position will be move to the top position of the previous pattern

Attention: The moves among each element are in linear; therefore it is unable to move in case of encountering the obstacle items.



16. About Direct Indication of Touching Interface

When editing the pattern, user can use the interface to directly point the position.

For the direct indication of coordinate, there are coordinate indication interface and the needle entry point indication interface, according to the difference of the instructed content.

16-1. Direct Indication of Coordinate

Touch the interface to directly indicate the coordinates.

1 Display of Coordinate Indication Interface

In the input interface of the pattern edition, press Indication Key (A) to display the coordinate indication interface.



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(2) Indicate the Coordinates

In the interface of coordination indication, press pattern display area (B). The Cross icon (C) is displayed at the position you pressed.

③ Confirm the Coordinate

Move the icon to the position wanted. Press ENTER (D) to display the confirmation interface of presser move.

④ Move the Presser

In the confirmation interface of presser move, press ENTER (E) to move the presser to the in the position of the icon, then the system returns to the interface for specifying the position.

Attention: The move of presser is in linear, so it is unable to move in case of encountering the obstacle items.





16-2. Direct Indication of Needle Entry Point

Determine the needle entry position directly.

Display of interface for indicating the needle entry point • shape point.

In the standard interface, press to activate the interface for indicating the needle entry point.

② Inquiry the Needle Entry Point

Press Search Backward Key C and Search Forward Key D to search the needle entry point from B point quickly.



Press enter button to perform operation,press exit button to cancle operation	<
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③ Decide the Needle Entry Point

Press ENTER (E) to activate the confirmation

interface of presser move. At this time, press to move the presser to the needle entry point specified by the icon.

If no needle entry point is selected, the become invalid.

Attention: The move of presser is in linear, so it is unable to move in case of encountering the obstacle items.

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17. Select the Displayed Function Code

Enable to select the displayed function code in the interface of code list.

1 Display the Selection Interface of Code List

In the interface of input mode, hold for 6 seconds to have access to the interface of setting mode Level 3.

Press the Key (A) to activate the interface of the code list.



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≜⊰ <u>001</u> **002** 003 004 Reference Point Setting В 005 01/09 С 006 007 Thread Tension 3 800 009 🕛 010 D ((0))

2 Select the Displayed Function Code

In the B section of code list selection interface, the function code keys will be displayed. The available functions are shown in dark while the functions shown in bright are unavailable.

Use Page Key C to display the other content of B section.

Press ENTER (D) to return to the mode interface

18. Codes of Function

The following is the code list.

Code	Functions
Thread-trimming	Input the order for thread-trimming
The 2nd Origin	Set the 2 nd origin.
Stop in Midway	Input the order for stop in midway
Scale the Reference Point	Set the reference point of scaling
Mirror Point	Input the mirror order
Running for A Circle	Input order to let sewing machine run for a circle
Tension of the 3rd Thread	ON/OFF the 3 rd thread tension
Mark 1	Make mark 1
Delay	Input the order for delay.
Setting of Upper Thread Tension	Set the upper thread tension
Area Division	Input the order for dividing area
Setting of Intermediate Presser Height	Set intermediate presser height
Sewing Machine Stop	Input the order for stopping the sewing machine

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Jump Feed	Create the sewing data of empty feed.
Point Sewing	Create the sewing data of point sewing
Normal Sewing	Create the sewing data of linear • curve sewing
Linear Normal Sewing	Create the sewing data of linear sewing
Curve Normal Sewing	Create the sewing data of curve sewing
Arc Normal Sewing	Create the sewing data of arc sewing
Circle Normal Sewing	Create the sewing data of circle sewing
Linear Zigzag Sewing	Create the sewing data of linear zigzag sewing
Curve Zigzag Sewing	Create the sewing data of the curve zigzag sewing
Arc Zigzag Sewing	Create the sewing data of arc zigzag sewing
Circle Zigzag Sewing	Create the sewing data of circle zigzag sewing
Linear Offset Sewing	Create linear offset sewing
Curve Offset Sewing	Create sewing data of curve offset sewing
Arc Offset Sewing	Create sewing data of arc offset sewing.
Circle Offset Sewing	Create sewing data of circle offset sewing

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Linear Double Orderly Sewing	Create sewing data of linear double orderly sewing
Curve Double Orderly Sewing	Create sewing data of curve double orderly sewing
Arc Double Orderly Sewing	Create sewing data of arc double orderly sewing
Circle Double Orderly Sewing	Create sewing data of circle double orderly sewing
Linear Double Reverse Sewing	Create sewing data of linear double reverse sewing
Curve Double Reverse Sewing	Create sewing data of curve double reverse sewing
Arc Double Reverse Sewing	Create sewing data of arc double reverse sewing
Circle Double Reverse Sewing	Create sewing data of circle double reverse sewing
Order Multiple Sewing	Create sewing data of order multiply sewing
Reverse Multiple Sewing	Create sewing data of reverse multiply sewing
Linear Reverse Sewing	Create sewing data of linear reverse sewing
Curve Reverse Sewing	Create sewing data of curve reverse sewing
Arc Reverse Sewing	Create sewing data of arc reverse sewing
Circle Reverse Sewing	Create sewing data of circle reverse sewing
Deletion of Mechanical Control Order	Delete the mechanical control order

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Sewing Speed Section Change	Change the speed of the created sewing data
Change Length of Pitch	Change the sewing pitch of the created sewing data
Element Deletion	Delete the created data in unit of element
Automatic Bar-tack	Make bar-tack sewing data
Condensation Sewing	Make sewing data of condensation sewing
Overlapped Sewing	Make sewing data of overlap sewing
Relative Point Deletion	Delete the needle entry point, the data afterward shall move
Relative Point Move	Move the needle entry point, the data afterward shall move.
Relative Top Point Deletion	Delete the top point of linear, the data afterward shall move
Relative Top Point Move	Move the top point of linear, the data afterward shall move
Absolute Point Deletion	Delete the needle entry point, the data afterward shall keep still.
Absolute Point Move	Move the needle entry point, the data afterward shall keep still.
Absolute Point Adding	Add the needle entry point; the data afterward shall keep still.
Absolute Top Point Deletion	Delete the top point of linear, the data afterward shall keep still
Absolute Top Point Move	Move the top point of linear, the data afterward shall keep still

Codes of Function	1900G Pattern-designing Instructions for Touch Panel
X Axis Symmetry	Add pattern symmetrical to the X Axis passing needle position
Y Axis Symmetry	Add pattern symmetrical to the Y Axis passing needle position
Point Symmetry	Add the pattern symmetrical to the present needle position.
Pattern Move	Move the position of pattern
Copy Pattern	Copy the pattern for sewing.
DEL 087 Pattern Deletion	Delete the pattern data
Initialization	Initialize the U disk
J 091 Presser Inversion Setting	Set the inversion
Sewing Speed	Input the sewing speed.
Setting Value Reference	Display the set values of the pattern data
Y Symmetry Pattern Inversion Orderly Sewing	Add an inversed pattern symmetrical to the Y Axis passing needle position
Function Code Input	Input the function code.
Ending Method Selection	Set whether to track data after finish /performance.
Function Selection. Setting	Allocate functions to F keys
Thread Reference Value of Upper Thread	Set reference value of upper thread tension

1900G Pattern-designing Instructions for Touch Panel

	Tension	
115	Reference Value of Intermediate Presser Height	Set reference value of intermediate presser height
z 🔆 130	Element Forward	Move the needle position to the end position of the element containing the present needle position; in case of end position, the needle position will move to the end position of the next element.
₹₩ 131	Element Backward	Move the needle position to the start position of the element containing the present needle position; in case of start position, the needle position will move to the start position of the next element.
135	Shape Point Adding	Add shape point.
136	Shape Point Move	Move shape point
137	Shape Point Deletion	Delete shape point

-END-

Safety Matters for Attention

3. Signs and Definitions

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 injuring. The signs and definitions of Marks are

shown in below:

A Danger	The incorrect operation due to negligence will cause the serious personal injury or
	even death.
A 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!")
\bigcirc	This kind of mark is "Forbidden".
e	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!")

4. Safety Matters for Attention

A Danger				
	For opening the control box, please turn off the power and take away the plug from socket firstly, then wait for at least 5 minutes before opening the control box. Touching the part with high voltage will cause the person injury.			
Caution				
	Using Environment			
0	Try not to use this sewing machine near the sources of strong disturbance like power cable disturbance and static disturbance. The source of strong disturbance will affect the normal operation of the sewing machine.			
0	The voltage fluctuation shall be within $\pm 10\%$ of the rated voltage. The large fluctuation of voltage will affect the normal operations of sewing machine, and the regulator will be needed in that circumstance			
0	Working temperature: $0^{\circ}C \sim 45^{\circ}C$. The operation of the sewing machine will be affected by environment with temperature beyond the above range.			
0	Relative Humidity: 35%~85 %(No dew inside the machine), or the operation of sewing machine will be affected.			
	The supply of the compressed gas should be over the consumption of the sewing machine. The insufficient supply will be cause the abnormal operation of the machine.			
	In case of thunder, lightning or storm, please turn off the power and pull plug out off the socket. Because these will have the influence on the operation of sewing machine			
Installtion				
\bigcirc	Please ask the trained technicians to install the sewing machine.			
\oslash	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 hands 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.
e	Grounding is a must. If the grounding cable is not fixed, it may cause the electric-shock and mistake-operation of machine
0	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.
0	Please add security cover on the machine head.
	Sewing
\bigcirc	This sewing machine can only be used by the trained staff.
\bigcirc	This sewing machine has no other usages but the sewing.
0	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 mistake 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.
0	During working, if the mistake 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.
0	For any trouble, please contact the trained technicians or the supplier of that machine.
	Maintenance & Inspection
\bigcirc	Only the trained technician can perform the maintenance and the inspection of the sewing machine
0	For the repair, maintenance and inspection, user should contact the professionals at manufacturer on 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 this Safety Matters for Attention.
\bigcirc	If the sewing machine damages due to the unauthorized modification, our company will not be responsible for it.

1 General Information

1.1 General

This computerized control system for sewing machine features the following advantages: 1) Adoption of the world leading AC servo control technology on main shaft motor provides 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 system control software can be updated via the remote communication, which is easy for user to improve the performance of machine.

1.2 Technical Parameters

N	Model				
INO.	Items	SC20X/MSC20X/MASC20X			
1	Usage	Doubling & Tacking, Button Sewing			
	Sewing Range	X(Left/ Right) Direction 40mm × Y(Forward/Backward)			
2		Direction 30mm			
3	Max Speed	Doubling & Tacking: 3200rpm			
		Button Sewing: 2700rpm			
4	Min Sewing Unit	0.1mm			
5	Cloth-feeding	Indirect Cloth-feeding (Pulse Motor Dual-shaft Drive)			
6	Stroke of Needle Rod	45.7mm			
7	Needle	DP ×5 #14 (DP×5 #11(F,M), (DP×17#21 Thick Fabric))			
8	Presser-lifting Device	Pulse Motor			
9	Presser Height	Standard 14mm, Max 17mm(at Reverse Lifting)			
10	Standard Pattern	50/100			
10	Number				
	Thread-wiping	Interaction by lifting presser with pulse motor			
11	Method				

12	Needle Thread	Electronic Thread-holder			
	Tension				
13	Hook	Semi-rotation standard hook or Semi-rotation double hook			
14	Oiling Method	Rotation Part: Slight Oiling			
15	Oil Sewing machine oil				
16	Lubricating Grease	Lubricating grease for sewing machine			
17	Data Memory U Disk				
10	Scaling Function	Independent scaling1% ~400% at X direction and Y direction			
18		respectively (1% for each step)			
19	Scaling Method	Change Stitch form length and stitch interval			
20	Sewing Speed 400-3200rpm(100rpm per step)				
21	Patten Selection By selecting the number of pattern (1-999)				
	Bottom Thread	Up/Down Method $(0 \sim 9999)$			
22	Counter				
23	Motor	500W Small AC Servo Motor (Direct Drive Mode)			
24	Size 263mm×153mm×212mm				
25	Weight of Control	About 1.4Kg			
	Box				
26	Power	770W			
27	Working Temperature	0°C~45°C			
28	Working Humidity	35%~85% (No Dew)			
29	Voltage Input	AC 220V ± 10%; 50/60Hz			

* At daily usage, please lower the max sewing speed according to the sewing condition.

 \times Effective standard for product:QCYXDK0004—2016 <code> Computerized Control System for Industrial Sewing Machine</code> .

1.3 Matters for Safe Using

Installation

- Control Box
 - Please install the control box according to the instruction

- Attachments
 - If other attachments are needed, please turn off the power and pull off the power plug.
- Power Cable
 - Do not press power cable with force or excessively twist power cable.
 - The power cables shall be fixed with a distance at 25mm away from the rotating component at least
 - Before powering the control box, user shall carefully check the voltage of power supply and position of power input on control box. If the power transformer is used, user should also check it before powering the machine. At this moment, the power switch of sewing machine must be set as "Off".
- Grounding
 - In order to avoid the noise disturbance and shock caused by electrical leakage, user should ground the grounding cable.
- Attachments
 - If the electrical attachments are needed, please connect them to the proper positions.
- Disassemble
 - When removing the control box, user should turn off the power and pull off the power plug.
 - At pulling off the power plug, user should hold the plug and remove it, instead of pulling the power cable only.
 - The control box contains the dangerous high voltage power. 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.

• Maintenance, Inspection and Repair

- Only can the trained technicians perform the repair and maintenance of this machine.
- When replacing the needles and shuttles, user has to turn off the power.
- Please use the spare parts from the authorized manufacturers

• Others

- Do not touch the rotating or moving part of the machine, especially the needle and belt, when the machine is working. User should also keep his/her hair away from those moving parts, so as to avoid the danger.
- Do not drop the control device on the floor, nor insert ant stuff into the slot on the control box.
- Do not run the machine without the cover shells
- If this control device is damaged or unable to work normally, please ask the technicians to adjust or repair it. Do not run the machine when the problem is not solved
- Please do not change or modify the control device without authorization

• Abandonment

Dispose it as common industrial trash.

• Warning and Danger

The mistake operation may cause danger. For the serious level, please refer to the figure at below

▲藝告		Mistake operations m	nay	▲注意		Mistake operations may	
		da a th	01			the harmonic and the	
		death.				the house or properties.	
■ The meaning of the figure are shown at below:							
\triangle	Please follow the instructions.		A	Wate	Watch the high voltage!		
	Watch the high temperature!			Grou	unding is must.		
\bigcirc	Operation is prohibited.						

1.4 The Preventions on Usage





7 . After replacing the motor, please set the installation angle of main motor according to this documents.



1.5 Standardization



1.6 Operation Method

We use the advanced touching operation technique on the operation panel, whose friendly interface and simple operation will bring the big changes to users in their usage. Users can finish the relating operations by using their fingers or other object to touch the screen. **Never use sharp object to touch the screen, otherwise the touching panel will suffer the permanent damage.**

The function keys include Ready Key, Information Key, Mode Key and Communication Key. For the specific operation, please refer to the chapters at below:



Never use sharp object to touch the screen, otherwise the touching panel will suffer the permanent damage

2 Operating Instruction

2.1 Common Buttons

The buttons for the common operation in each interface are shown at below:

No.	Figure	Functions		
1	×	$ESC \rightarrow Quit$ the current interface. At data change interface, it is for canceling		
		the change of data.		
2		Enter \rightarrow Confirm the changed data.		
3	Ŧ	Plus \rightarrow Increase the value		
4		Minus \rightarrow Decrease the value		
5	//	Reset \rightarrow Release the Error		
6	NO	Number Input \rightarrow Display the number keyboard and input the number.		
7	Ξ	READY Key \rightarrow Shift between the data input interface and sewing interface		
8	•	Information Key \rightarrow Shift between the data input interface and information		
		interface		
9	((()))	Communication Key \rightarrow Shift between the data input interface and		
		communication interface		
10	Q	Mode Key \rightarrow Shift between the data input interface and communication		
		interface		
11		Home Key→One click back to main interface。		

2.2 Basic Operation



2.3 Operation of Normal Pattern

(1) Sewing Data Input Interface

The data input interface is shown at right. For the detailed functions, please refer to the Function Key List



Function Key List:

No.	Function	Content				
А	Pattern Registration	At most, 999 normal patterns can be registered.				
В	Pattern Naming	At most, 14 figures can be input.				
R	Thread-catching (Displayed according to the actual condition of machine)	Activate the thread-catching function. It is affected by parameter U35.				
с	Threading	Lower the presser to display the interface. For lifting the presser, please press "Presser Up" button.				
D	Winding	Press to start winding.				
E	Pattern No. DisplayDisplay the current pattern number					
----	---	---				
Е	Sewing Pattern	The button will display the shape of the current pattern. Press it to				
	Selection	enter the interface for selecting patterns				
G	Pattern Stitch	Display stitch number of the current pattern				
	Number	Display such humber of the current pattern				
		Display the actual size of current pattern at X direction.				
н	X Actual Size	Use parameter U64 to input the actual size, at this moment the X				
		Actual Size button is displayed.				
		The button will display the X scale rate of the current pattern.				
I	X Scale Rate	Press it to enter the interface for setting. It is affected by				
		parameters U64 & U88.				
		Display the actual size of current pattern at Y direction.				
J	Y Actual Size	Use parameter U64 to input the actual size, at this moment the Y				
		Actual Size button is displayed.				
		The button will display the Y scale rate of the current pattern.				
к	Y Scale Rate	Press it to enter the interface for setting. It is affected by				
		parameters U64 & U88.				
L	Max Speed	Display the Max Speed. Press this button to set the speed				
NA	Prompt Pattern (P	It is used for P pattern registration. At most, 50 P patterns can be				
	Pattern) Registration	registered.				
	P Pattern File Folder	Display the file felder number of current P pattern				
	Number	Display the me tolder number of current 1 pattern				
N	P Pattern File Folder	Shift D pattern file folder number orderly				
	Selection	Sint r paten ne folder hunder ordenty.				
		Display the registered P pattern. Press it to enter the interface for				
Ρ	P Pattern Selection	inputting P pattern data.				
		This button is not displayed at initial status.				



Function Key List:

No.	Function	Content
	Trial Sewing	Press it to enter the trial sewing interface, where the pattern
		shape can be set.
	Thread-catching	
- -	(Displayed according to	Activate the thread-catching function. It is affected by
	the actual condition of	parameter U35.
	machine)	
В	Presser Down	Lower presser to display the presser down interface. For lifting
		the presser, please press the "Presser Up" Button.
	Return to Origin	Press it to have presser return to the start sewing point and go
Ĺ		up.
D	Pattern Number	Display the number of the current pattern
E	Pattern Stitch Number	Display the stitch number of the current pattern

F	Pattern Shape	Display the shape of the current pattern
G	Max Speed	Display the Max Speed
н	Counter Setting	Press it to set the counter type and current counter value
I	X Actual Size	Display the X actual size of current pattern
J	X Scale Rate	Display the X scale rate of current pattern
к	Y Actual Size	Display the Y actual size of current pattern
L	Y Scale Rate	Display the Y scale rate of current pattern
М	Sewing Speed	Display the current sewing speed
N	Set Sewing Speed	Change the sewing speed
0	P Pattern File Folder Number	Display the number of the current P pattern file folder
Р	P Pattern Selection	Display the registered P pattern. Press it to enter the interface for sewing P pattern. This button is not displayed at initial status.
Q	Pause	Press it to stop the machine. It is affected by parameter U31. When this button is selected, the interface will only display this button

2.4 Pattern Registration



2.5 Pattern Naming



2.6 Winding





2.7 Pattern Selection







2.8 Sewing Data Setting

① Enter Interface for Setting the Sewing Data

In data input interface, pressing button A, B or C can enter the scale rate setting interface and speed limitation interface respectively.

	Item	Input Range	Default
			Value
А	X	1.0~400.0%	100.0%
	Scale		
	Rate		
В	Y	1.0~400.0%	100.0%
	Scale		
	Rate		
С	Max	400~2700rpm	2700rpm
	Speed	(Different	
		among	
		different	
		models)	

Note 1: Parameter U64 can shift between the setting of scale rate and the setting of actual size.

Note 2: The range and the default value of Max speed are affected by the parameter U01.







2.9 P Pattern Registration





2.10 Trial Sewing

① Display the interface of sewing

At data input interface, press, the background of screen will change to blue, and the

system enters the interface for sewing

② Display of Trial Sewing



Step the pedal to lower the presser. Use and to confirm the shape. After user holds that button for a while and then release it, the presser will still keep moving. At this moment, please press to stop it Press to have needle return to origin. And the system will return to the serving

Press to have needle return to origin. And the system will return to the sewing interface.

4 End Trial Sewing

Press to quit the trial sewing interface and return to sewing interface. When the pattern is not at the start position or end position, user can carry out sewing in the middle by

stepping the pedal. For quit, please press and turn off the activated interface. Then the sewing interface will displayed and the system returns to the sewing start position.

2.11 Counter Operation



2.12 Emergency Stop





3 Operations on Prompt (P) Pattern

3.1 P Pattern Data Input

The Prompt pattern is called P Pattern for short, which contains a normal pattern and its relating sewing parameters, like X scale rate, Y scale rate, speed limitation and so on. If selecting a P pattern, user will get rid of the trouble for setting the parameters of the pattern at each time sewing

In the Data I 50 P g	right picture, is shown the P Patte Input Interface. patterns can be registered at most.	$\begin{array}{c} \mathbf{r} \\ \mathbf{Q} \rightarrow \mathbf{N} \\ \mathbf{Q} \rightarrow \mathbf{N} \\ \mathbf{R} \rightarrow 1 \\ \mathbf{S} \rightarrow \mathbf{O} \\ \mathbf{R} \rightarrow 1 \\ \mathbf{S} \rightarrow \mathbf{O} \\ \mathbf{R} \rightarrow 1 \\ \mathbf{S} \rightarrow \mathbf{O} \\ \mathbf{R} \rightarrow \mathbf{I} \\ \mathbf{S} \rightarrow \mathbf{O} \\ $	
List o	f Function Keys:		
No.	Functions	Content	
А	P Pattern Edition	Edit the content of P pattern	
В	P Pattern Copy	Copy the content of existing P pattern to an empty pattern number.	
С	Pattern Naming	14 figures can be inputted at most.	
D	Threading	Presser it to lower the presser.	
E	Winding	Wind the thread with a press on	
F	P Pattern Number Display	Display the number of the selected pattern.	
G	Sewing Shape Number Display	Display the number of the normal pattern quoted in the existing P pattern.	



No.	Functions	Content
Н	Sewing Shape Selection	Display the sewing shape of the current pattern
Ι	Pattern Stitch Number Display	Display the stitch number of the currently selected pattern.
J	X Actual Size Display	Display the X actual size of current pattern
K	X Scale Rate Setting	Display the X scale rate of current pattern
L	Y Actual Size Display	Display the Y actual size of current pattern
М	Y Scale Rate Setting	Display the Y scale rate of current pattern
Ν	Max Speed Limitation	Display the Max Speed
0	X Travel Amount Display	Display the X travel amount of the currently selected pattern
Р	Y Travel Amount Display	Display the Y travel amount of the currently selected pattern
Q	Return to Normal Pattern Data Input	Return to the interface for inputting normal pattern data
R	P Pattern File Folder Display	Display the file folder number of the current P pattern
S	P Pattern File Folder Selection	Shift the file folder number of P pattern in sequence.
Т	P Pattern Selection	Display the registered P pattern

3.2 P Pattern Edition





3.3 P Pattern Copy





3.4 P Pattern Selection



3.5 P Pattern Sewing



List of Functions Keys:

No.	Functions	Content
^	Trial Souring	Press it to have access to Trial Sewing Interface,
A	mai Sewing	where user can determine the shape of f pattern.
В	Threading	Press it to lower the presser.
С	Return to Origin	Press it to have the presser return to the start point.
D	P Pattern Number Display	Display the number of the currently selected pattern.
E	Sowing Shana Number Display	Display the number of the normal pattern quoted in
	Sewing Shape Number Display	the existing P pattern.
E	Pattarn Stitch Number Display	Display the sewing stitch number of the currently
	Tattern Stiten Number Display	selected pattern
G	Max Speed Limitation	Display the Max Speed Limitation

No.	Functions	Content
н	Sewing Speed Display	Display the current sewing speed
I	Sewing Speed Setting	Change the sewing speed
J	X Actual Size Display	Display the X actual size of current pattern
к	X Scale Rate Setting	Display the X scale rate of current pattern
L	Y Actual Size Display	Display the Y actual size of current pattern
м	Y Scale Rate Setting	Display the Y scale rate of current pattern
N	X Travel Amount Dicplay	Display the X travel amount of the currently selected
	A Haver Amount Display	pattern
0	Y Travel Amount Display	Display the Y travel amount of the currently selected
		pattern
		Press it to set the type and the present value of
		counter.
Р	Counter Setting	: Sewing Counter
		No. Pieces Counter
•	P Pattern File Folder Number	Display the file folder number of the current P
ų	Display	pattern
R	P Pattern Selection	Display the registered P pattern

4 Operations on Combination (C) Pattern

4.1 C Pattern Data Input

The combination pattern, called as C pattern for short, consists of a group of P patterns, which can contain 50 sub-patterns at most. In this model, 50 C patterns can be registered into the system at most.

For having access to the Interface of Combination Pattern Data Input (as shown at right), please refer to the content in [8.5 Change Sewing Type]



List of Function Keys:

No.	Function	Contents	
А	C Pattern	Register a new C nattern	
	Registration		
В	C Pattern Copy	Copy the content of Current C pattern to an empty pattern number.	
С	Pattern Naming	14 figures can be inputted at most.	
D	Threading	Press it to lower the presser.	
E	Winding	Wind the thread with a press on	
	C Pattern		
F	Number	The number of the currently selected pattern is displayed on the	
	Selection	button. Press it to have access to the C Pattern Selection Interface.	

No.	Function	Contents	
G	Sewing Sequence	Display the sewing sequence of the currently selected pattern. The	
	Display	pattern with a blue marks is the initial sewing pattern.	
Н	C Pattern Shape	Press it to have access to C Pattern Edition Interface. Operator can	
	Selection	select a P pattern to input.	
Ι	D	50 C patterns can be registered at most, and 12 C patterns can be	
	Page	displayed on each page at most.	

4.2 C Pattern Edition





4.3 C Pattern Selection



4.4 C Pattern Sewing



List of Function Keys:

No.	Functions	Contents
•	Trial Carrier	Press it to have access to Trial Sewing Interface, where
A	That Sewing	user can determine the shape of f pattern.
В	Threading	Press it to lower the presser.
С	Return to Origin	Press it to have the presser return to the start point.
D	C Pattern Number	Display number of current C pattern
E	Sewing Shape Number	Display the number of the sewing shape registered under
	Display	the current C pattern
F	Sewing Sequence Display	Display the sewing sequence number at current pattern
G	Total Number Display	Display the total number of sub-patterns registered in the
	Total Number Display	current C pattern

No.	Functions	Contents
н	Sewing Sequence Forward/Backward	Select the previous or next shape for sewing.
I	Pattern Shape	Display the shape registered at current sewing
J	Patten Stitch Number Display	Display the stitch number of the shape registered at current C pattern.
к	Max Speed Limitation Display	Display the Max speed at sewing this shape
L	Sewing Speed Display	Display current sewing speed
м	Sewing Speed Setting	Enable to change sewing speed
N	Counter Setting	Press it to set the type and the present value of counter. Sewing Counter No. Pieces Counter
0	X Actual Size Display	Display the actual size of the selected pattern in X direction.
Р	X Scale Rate Setting	Display the X scale rate of the selected pattern.
Q	Y Actual Size Display	Display the actual size of the selected pattern in Y direction.
R	Y Scale Rate Setting	Display the Y scale rate of the selected pattern.
S	X Travel Amount Display	Display the X travel amount of the currently selected pattern
т	Y Travel Amount Display	Display the Y travel amount of the currently selected pattern

5 Pattern Edition

5.1 Have Access to Pattern Edition Mode





List of Function Keys:

No.	Function	Contents
А	Load Pattern	Display the Pattern Loading Interface
В	Input Pattern	Display the Pattern Input Interface
с	Needle-entry Point	Promptly locate the needle entry point; when editing the patterns,
	Inquiry	user can input the coordinates of the sewing point directly.
D	Lift needle	Make needle return to the highest point
E	Move Intermediate	Lift or lower the intermediate presser
	Presser	
F	Current Needle	
	Position	Display the position information of needle at present
	Information	
G	Code List	Display the entire available editing functions. Please refer to [List
		of Editing Functions] for details.
н	Information	Display the detailed information of the currently edited pattern
	Display	
I	Display Setting	Enable wide-angle setting, needle entry point display setting and
		so on

No.	Function	Contents
J	Trial Sewing	Sew the currently edited pattern through a trial sewing
к	Forward · Backward Feeding	Move one stitch from the current position (forwards ; backwards)
L	Return to Origin	Return the needle from current position to origin
М	Function Keys	Call the functions on the buttons directly
		1 Empty feeding
		2 Point Sewing
		3 Normal Sewing
		4 : Thread-trimming
		5 Cancellation of Mechanical Control Order
		6 CL . Element Deletion
		7 Changes on Sewing Speed Section
		8 Delete Current Pattern
N	Hot Keys	By using Function of Selection and Setting (Function Code 112), user can distribute the needed functions to each button. After the distribution, the figure of that function is displayed in the corresponding key.
0	Pattern Shape Display Area	Display the pattern



No.	Item	Content
1	Absolute	The absolute coordinate of current needle position relative to the
	Coordinate	origin
2	Relating	The relating coordinate of current needle position
	Coordinate	
3	Speed	The sewing speed or empty feeding speed of current point.

No.	Item	Content
4	Interval	The length of current element stitch. (If the stitch is scaled, the value
		before the scaling will be displayed.)
5	Type of Element	Types of current elements. At setting sewing data, the system will
		displayed the element types, like jump feed 4, broken line 4, free
		curve and so on). At setting the mechanical orders, the type of
		the control order will be displayed (like thread-trimming).
6	Types of Needle Entry	The types of the needle entry position:
		Start of Design: the start point (Origin) of a design.
		Middle Point of Element: the middle point of the element
		(neither the top point nor the ending point of the element).
		Top Point: the top point of a broken line.
		End Point of Element: the ending point of the element
		End Point of Pattern: the ending of pattern.

5.2 Pattern Edition

Use Function of Pattern Edition to input the following pattern.














5.3 Quit Pattern Edition Mode



6 Information Functions

The Information Functions contain the following three functions:

- 1) The oil replacement (grease-up) time, needle replacement time, cleaning time, etc. can be specified and the warning notice can be performed after the lapse of the specified time.
- 2) 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 picture

6.1 Maintenance & Repair Information





6. 2 Input Time for Maintenance & Repair





6.3 How to Release Alarm

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

prompt interface. If user wants to clear the maintenance and repair time, please press

the clearance of the maintenance and repair time, the information prompt interface will be

displayed after each one sewing task.

The following are the prompt code for each item

•Needle Replacement : M-052

•Oil Replacement Time: M-053

•Cleaning Time: M-054

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 of start.

There are two ways to activate the production control interface:

- Via Information Interface
- Via Sewing Interface

6.4.1 Via Information Interface





activate the Information Interface.



6. 4. 2 Via Sewing Interface



6. 4. 3 Setting on Production Control









6.5 Display Threading Figure



6.6 Alarm Record





6.7 Running Record





6.8 Setting of Periodical Password

13) In maintenance level, Press to set periodical password

In this interface, the system will ask user to input the User ID. Input the right manufacturer ID to enter the password management mode, where user can set and manage the periodical passwords.

 At most ten periodical passwords with different activation dates can be set

◆ The system will display the information of passwords set by manufacturer.







18) Input the super password

Press the **[**Super Password **]** to enter

the interface for setting super password

- X At most, nine super passwords can be input
- ※ At the password confirmation, make sure the two input passwords are same

Input password: 2 3 5 6 1 4 7 8 9 0 В А С D G Е F н I J к L М N 0 Ρ Q R S Т U v W Y Ζ Х CLR ABC

Input super password

19) Input periodical password

Press **(**Password-1 **)** to enter the first password date, where user can input the first date for activation. After selecting

the proper date, user can press for confirmation. Then enter the password

setting interface to input the password.

***** The date should not be earlier than the system date

****** At the password confirmation, make sure the two input passwords are same

20) Input other periodical password

The setting of other periodical password is same to that in step ⑦. Please take the reference to that

The next activation date shall be later than the previous date.

•	October 2018					•	
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
40		1	2	3	4	5	6
41	7	8	9	10	11	12	13
42	14	15	16	17	18	19	20
43	21	22	23	24	25	26	27
44	28	29	30	31	1	2	3
45	4	5	6	7	8	9	10

X

Ļ



22) Clear Password before Activation

It is to clear the passwords before its activation.

A . The method for entering the password interface is same to that of the password setting

B、 Input the right factory ID to activate the right interface.

C. The system will display current clock and the activation dates

D , Press to delete the password orderly

Input the right periodical password to clear the current password. If the super password is input, all passwords will be cleared;

After the deletion of the password, the date of that password will be displayed in red.

If all the passwords are cleared, the system will automatically quit to the main interface of information.

11 Clear Password at Activation

If the system has password and that password is still effective, it will be activated at the activation day.

If user wants to use the machine he should input the right password.

A 、 The effective passwords include current password and super password

 B_{x} If the current password is input, the current password will be deleted. After user clears the current password, if it is the last password in machine, no more activation of password will happen in future.

C₁ If the super password is input, all the periodical passwords will be deleted.



7 Communication Functions

At Communication, user can perform the following functions:

- Download the sewing data made at other sewing machines or produced by the pattern-designing software to the sewing machine;
- Load sewing data to U disk or computer
- ➢ Load parameters from U disk
- > Input the parameters within the operation panel to U disk
- > Update the software within the operation panel

7.1 About the Available Data

The available data is sewn at below, as well as the data type:

Data Type	Standard Type
VDT	[0-9][0-9][1-9].vdt
DXF	[0-9][0-9][1-9].dxf
DCT /DCD	[0-9][0-9][1-9].dst/
D21/D2R	[0-9][0-9][1-9].dsb
D /D 4	[0-9][0-9][1-9]. (1-599)/
B/ BA	[0-9][0-9][1-9]. (600-999)
PAT	[0-9][0-9][1-9].pat

When saving data to the U disk, user needs save it to the DH_PAT folder. Otherwise, the file is unable to be read.

7.2 Operations



7.3 Pattern Transfer



In communication interface, press:

A: Input patterns from U Disk to

Operation Panel

B: Output patterns from Operation Panel

to U Disk

Path of U Disk: DH_PAT

- When inputting patterns from U disk, user has to save the pattern into the DH_PAT in the U disk.
- When outputting patterns from operation panel, user has to save the pattern into the DH_PAT in the U disk.
- % Naming Method of Patterns within U Disk

When inputting patterns from U

disk, user needs follow the naming rule

at below::

File Name: 3 figures, 001~999

Suffix: vdt (no matter at CAP or not)

Example:

Right Names: 100.vdt, 102.VDT

Other naming methods are wrong,

which can not be recognized by

machine



2 Press button A to enter the interface for inputting patterns from U Disk

Note: If the pattern in U disk has the same name to the pattern within the panel, the pattern number will be displayed in red. The pattern with red code can only be inputted with button F, as shown in figure 1

A、Use 【Up Arrow】, 【Down Arrow】
to turn the page
B、 Use these three methods to select

patterns

≻



Input Pattern Number

C、 Press to finish pattern input. At this moment, the patterns inputted and the patterns selected share the identical pattern number, as shown in figure 2

to delete the selected

D 、 Press



Figure 1



Figure 2





7.4 Parameter Transfer

1 Display the Communication Interface

In communication interface, press:

A: Input parameters from U Disk to

Operation Panel

B: Output parameters from Operation

Panel to U Disk

- When inputting patterns from U disk, user has to save the parameters into the DH_PARA in the U disk with name ukParam.
- When outputting patterns from operation panel, user has to save the parameters into the DH_PARA in the U disk with name ukParam.
- X The parameter file is the binary file, which is operated on the control panel. User can not change that file manually on PC, or the file may be damaged





7.5 Software Update





8 Mode & Parameter Setting



No.	Figure	Functions	Content		
1		Level 1 Parameters Setting	Set the Level 1 (U) parameters		
2	1.2.3	Counter Setting	Set the type of counter, counting value and default value		
3	NÓ	Sewing Type Setting	Shift between normal pattern sewing and combination pattern sewing		
4		Pattern Edition	Have access to pattern edition status		
5	AB C	Letter embroidery	For letter pattern edit		
6	NO.	Pattern Lock	Enter the interface for locking pattern		
7		U Disk Initialization	Initialize the U disk.		
8	Ver	Software Version Inquiry	Inquire the versions of the current panel, main controller and motor		
9	•	Keyboard Lock	Lock some functions that can be set.		
10		Test Mode	Set the mechanical devices and LCD		
11	1	Parameter Back-up	Backup or recover the current parameters		
12		Activate Parameter Edition	Activate or deactivate the edition of parameters		
13	J.	Level 2 Parameters Setting	Set the Level 2 (K) parameters		

8.1 List of Function Keys

No.	Figure	Functions	Content
14		Play Video	Play the video

8. 2 Level 1 Parameters Setting

1 Set Parameter 01/05 X h Max. Speed Select to enter the interface of The syn. time of Thread-Tension switching at thread trimming Level 1 parameter setting (shown as the sewing speed of 1st stitch(without Catch-Thread Dev) 400 figure at right). Start speed of 2nd stitch(without Catch Thread Dev) 900 Start speed of 3rd stitch(no Catch-Thread Dev) Press to quit the setting Start speed of 4th stitch(without Catch-Thread Dev) interface. When some parameters are Start speed of 5th stitch(without Catch-Thread Dev) changed, the system will display the Synchro-time of tension in start (without Catch-Thread Dev) -5 "Modified" in the parameter setting The switch of the phase presser OFF interface. Modified ((0))After you select the paramenters you want to modify, you will enter the pass word 1 input screen, press to clear all the 2 3 4 5 6 1 input, and press to delete one character at a 7 8 9 0 А В time.Enter the parameter setting interface after erteing the correct password. С D Е F G н Parameter settings are divided into data I L М Ν J Κ input type and selection type. Ρ S 0 Q R Т Examples are as follows: U V W X Y Ζ CLR ABC
Select U01 and enter the interface below
U01 Max. Speed
3200 RPM
Range: 400 - 3200 Step: 100
Max. Speed
4 0 0
7 8 9
C
2 Check the changed parameter
A、 When parameter is changed, the
system will display "Modified"
key at parameter setting
interface.

B. In the parameter setting interface, press [Modified] to check the changed parameters.

At first, the system will ask user to input the password. For the operation at password input interface, please refer to the "A" at ②. After inputting the right password, user can enter the interface for inquiring changed parameters.

C、 Under the interface of changed parameter inquiry, user can find the list containing all the changed parameters with their current value and default value.

In that interface:

• Press [All Rest] will restore all the changed parameters to their default



01/05		×
U01	Max. Speed	3200
U09	The syn. time of Thread-Tension switching at thread trimming	0
U10	sewing speed of 1st stitch(without Catch-Thread Dev)	400
U11	Start speed of 2nd stitch(without Catch- Thread Dev)	900
U12	Start speed of 3rd stitch(no Catch- Thread Dev)	3200
U13	Start speed of 4th stitch(without Catch- Thread Dev)	3200
U14	Start speed of 5th stitch(without Catch- Thread Dev)	3200
U16	Synchro-time of tension in start (without Catch-Thread Dev)	-5
U25	The switch of the phase presser	OFF
Modif	ïed	
2	0 💼 📖	<u>a</u>

values 01/01 • Click Parameter Name, like [Presser Select Restore All Restore Encrypt Type] and then press [Select Rest.] Current Reset to restore this parameter to the U200 ΕN Language setting default value. User can select many U214 reverse device setting OFF parameters at here. • Press Parameter Number, like [U14] to enter the parameter setting interface, where user can reset the parameter value. • When the pages are more than one, user can use arrow key to turn the page 9 to quit the interface. • Press ((0))П

③ List of Level 1 Parameters

No.	Parameter	Range	Unit	Default
				value
U01	Max Sewing Speed	400~3000	100rpm	2700rpm
U02	Start Speed of 1 st Stitch (with	400~1500	100rpm	1500rpm
	thread-catching function)			
U03	Start Speed of 2 nd Stitch (with	400~3000	100rpm	3000rpm
	thread-catching function)			
U04	Start Speed of 3 rd Stitch (with	400~3000	100rpm	3000rpm
	thread-catching function)			
U05	Start Speed of 4 th Stitch (with	400~3000	100rpm	3000rpm
	thread-catching function)			
U06	Start Speed of 5 th Stitch (with	400~3000	100rpm	3000rpm
	thread-catching function)			
U07	Thread Tension of 1st Stitch (with	0~200	1	200
	thread-catching function)			
U08	Thread-tension at Thread-trimming	0~200	1	0
U09	Thread Tension Changeover Timing at	-6~4	1	0
	Thread-trimming			
U10	Start Speed of 1 st Stitch	400~1500rpm	100rpm	400rpm
U11	Start Speed of 2 nd Stitch	400~3000rpm	100rpm	900rpm
U12	Start Speed of 3 rd Stitch	400~3000rpm	100rpm	2700rpm

No.	Parameter	Range	Unit	Default
				value
U13	Start Speed of 4 th Stitch	400~3000rpm	100rpm	2700rpm
U14	Start Speed of 5 th Stitch	400~3000rpm	100rpm	2700rpm
U15	Thread Tension of 1st Stitch (No	0~200	1	0
	thread-catching function)			
U16	Thread Tension Changeover Phase at	-5~2	1	-5
	Sewing Start			
U25	Presser Height Division Switch	0: Permit Presser	1	1
	ON: Permit Presser Height Division	Height Division		
	OFF: Forbid Presser Height Division	1: Forbid Presser		
		Height Division		
U26	Adjustment of Divided Presser Height at	50~90	1	70
	2 Levels' Stroke			
U27	Counting Unit of the Sewing Counter	1~30	1	1
U31	Stop Sewing Machine with Button on	0: Invalidity	1	1
	Panel	1: Pause Key at		
	OFF: Invalidity	Panel		
	PANEL: Pause Key at Panel	2 : External		
	EXT: External Switch	Switch		
U32	Settings on Buzzer Sound	0: Silence		2
	OFF: Silence	1: Operating		
	PAN: Operating Sound	Sound		
	ALL: Operating Sound + Alarm	2: Operating		
		Sound + Alarm		
U33	Number of Releasing Stitch at	1~7	1	2
	Thread-catching			
U34	Display Phase at Thread-catching	-10~0	1	-5
U35	Thread-catching Switch	0: Permit	1	1
	ON: Permit	1: Forbid		
	OFF: Forbid			
U36	Select Time for Feeding Actions	-8~16	1	12
U37	Presser Status at Sewing End	0 : Return and	1	1
	0: Return and then lift presser	then lift presser		
	1: Lift presser and then return	1 : Lift presser		
	2: step the pedal first and then lift the	and then return		
	presser			
U38	Presser Goes Up at Sewing End	0: Presser Up	1	0
	ON: Presser Up Permitted.	Permitted.		
	OFF: Presser Up Forbidden	1: Presser Up		
		Forbidden.		
1				

No.	Parameter	Range	Unit	Default value
U39	Whether to search origin after sewing (combination sewing not included) OFF: Not Search ON: Search	0: Not Search 1: Search	1	0
U40	Origin-Searching at Sewing Combination Patterns OFF: Not Search Origin PAT : Search Origin at Finishing Each Pattern CLC : Search Origin at Finishing Each Cycle	 0: Not Search Origin 1: Search Origin at Finishing Each Pattern 2: Search Origin at Finishing Each Cycle 	1	0
U41	Search Origin at Shifting P Pattern OFF: Invalid ON: Valid	0: Invalid 1: Valid		0
U42	Needle Rod Stop Position UP: Upper Position DEAD: Highest Point	0: Upper Position 1: Highest Point	1	0
U46	Permit Trimming the Thread ON: Permit OFF: Forbid	0: Permit 1: Forbid	1	0
U49	Winding Speed Setting	800~2000	100rpm	1600rpm
U64	Select Unit for Size Change %: Input Percentage SIZ: Input Actual Size	0: Input Percentage 1: Input Actual Size		0
U88	Scale Mode OFF: Forbidden PIT: Change at Stitch Pitch STI: Change at Stitch Number	0: Forbidden1: Changes atStitch Pitch2: Changes atStitch Number		1
U97	Thread-trimming Method after Pause AUT: Automatic MAN: Manual	0: Automatic 1: Manual	1	0
U135	Return to Start Point or Origin at Sewing End 0: Start Point 1: Origin	0: Start Point 1: Origin	1	0
U165	Height of middle presser follow	0~10 (Attention:Only K02	1	0

No.	Parameter	Range	Unit	Default
		paramotor the		value
		middle presser		
		foot control		
		mode is 3 height		
		of middle		
		nresser		
		follow the		
		Il-narameter is		
		displayed.		
U190	Back Light Auto Off	OFF: Not Auto		0
	OFF: Not Auto Off	Off		
	ON: Auto Off	ON: Auto Off		
U191	Back Light Off Wait Time	1~9	1m	3m
U192	Back Light Adjustment	20~100		100
U193	Modify the Counter Value	0: Permit		0
	OFF: Permit	1: Forbid		
	ON: Forbid			
U194	Operation at Reaching set value of	OFF : Stop		0
	Counter	Sewing		
	OFF: Stop Sewing	ON : Continue		
	ON: Continue Sewing	Sewing		
U195	Voice Column	30~63		50
U200	Language	0: Chinese		0
	0: Chinese	1: English		
	1: English			
U201	Set Language at Power-on	OFF: No		0
	OFF: No	ON: Yes		
	ON: Yes			
U212	Presser Down Order at Separating Valves	0: Same Time		0
	0: Same Time	1 : Left then		
	1: Left then Right	Right		
	2: Right then Left	2 : Right then		
		Left		
U213	Presser Up Order at Separating Valves	0: Same Time		0
	0: Same Time	1 : Left then		
	1: Left then Right	Right		
	2: Right then left	2 : Right then		
		Left		
U214	Reverse Presser	OFF: Forbid		1
	OFF: Forbid	ON: Enable		
	ON: Enable			

8. 3 Level 2 Parameters Setting

1 Parameter Setting

12

At Mode Setting Level 3 Interface, press

to have access to Level 2 Parameter Setting Interface (as shown in right picture). For the operation methods, please refer to descriptions at 8.2 Level 1 Parameters Setting.

When some parameters are changed, the system will display the "Modified" in the parameter setting interface.



to quit the setting interface

(2) Check the changed parameters

When parameter is changed, the system will display "Modified" key at parameter setting interface

In the parameter setting interface, press **(** Modified **)** to check the changed parameters. User can also reset the parameters here.

For the specific operation, please refer to "8.2 Level 1 Parameter Setting"





③ Height of middle presser follow	U165 Height of middle presser follow
When the model is 1906,the U-parameter list will display the U165 Height of middle presser follow parameter.The middle presser foot can be set follow-up height.	Range: 0 - 10 Step: 1 Height of middle presser follow 1 2 3 4 5 6 7 8 9 0 € Σ 6 7 8 9 0 € Σ 6 7 8 9 0 € Σ
(4) Intermediate presser ref.value When the model is 1906,the main screen will display Intermediate presser ref.value key , Hold it Intermediate presser ref.value key , configurable Intermediate presser ref.value.	Intermediate presser ref. value 2 (Range:0 ~ 5) 1 2 3 4 5 6 7 8 9 0 1 2 0 1 5 6 7 8 9 0 1 </td

(5) List of Level 2 Parameters

No. Parameters Range Unit Default

No.	Parameters	Range	Unit	Default
K01	Pedal Selection	0: Simulate	1	0
	0: Simulate	2: Double Pedals		
	2: Double Pedals	3: Double Pedals, only the		
	3: Double Pedals, only the operation	operation pedal can		
	pedal can control machine	control machine		
K02	Presser Control	0: No Presser Control		0
	0: No Presser Control	2: Presser Controlled by		
	2: Presser Controlled by Solenoid	Solenoid		
	3: Presser Controlled by Mechanism	3: Presser Controlled by		
		Mechanism		
K19	Presser Up Time	0~50 (For air valve only)	5	30
K21	Simulated Pedal Position 1	50~200	1	70
		50:200		120
K22	Simulated Pedal Position 2	50~200	1	120
422	Simulated Dadal Desition 2	F0~200	1	105
K23	Simulated Pedal Position 5	50*200	1	185
К27	Speed for Lowering Presser	100~4000pps	10pps	4000pps
K28	Speed for lifting Presser	100~4000pps	10pps	1500pps
К29	Speed for Lifting Presser at Sewing End	100~4000pps	10pps	3000pps
К43	Trimming Speed	300~700rpm	100rpm	400rpm
каа	Empty Feeding Control At	OFF. Ineffective	1	1
	Thread-trimming	ON: Effective	-	-
	OFF: Ineffective			
	ON: Effective			
K45	Needle Guider Diagram at Controlling	1.6~4.0mm	0.2mm	1.6mm
	Empty Feeding			
K56	Move Rage +X Direction	0~50mm	1mm	20mm
K57	Move Range – X Direction	0~50mm	1mm	20mm
K58	Move Range + Y Direction	0~30mm	1mm	10mm
К59	Move Range – Y Direction	0~30mm	1mm	20mm
K64	Thread-stirring Method	0: By Solenoid	1	1
	0: By Solenoid	1: By Motor		
	1: By Motor			

No.	Parameters	Range	Unit	Default
K66	Number of pulse at Stirring Operation	30~60	1	45
	with Presser Linkage			
K74	Selection of Solenoid/ Air-driven	AIR: Air-driven Presser	1	1
	Presser	MOTO: Motor Presser		
	AIR: Air-driven Presser			
	MOTO: Motor Presser			
К95	Trimming Angle	-10~10	1	0
K112	Stop Position Compensation	-10~10	1	0
K122	OC	-128~128	2	0
K123	OD	-128~128	2	0
K124	BD	-512~512	4	0
K125	OC	184.5~244.5	0.1	208
K126	OD	144.6~204.6	0.1	174
K127	BD	39~59	0.1	53
K128	Stepping Control Method	0: DSP1 Close Loop,	0~3	1
		DSP2 Close Loop		
		1: DSP1 Opean Loop,		
		DSP2 Close Loop		
		2: DSP1 Close Loop,		
		DSP2 Opean Loop		
		3: DSP1 Opean Loop,		
		DSP2 Opean Loop		
K135	Solenoid Junction Delay	-10~30		
K137	Solenoid Thread-catching Angular	-150~150		
	Deflection			
K138	Solenoid Suction Delay	-1~1		
K140	Thread Tension Control Method	0: Electronic Method		
	0: Electronic Method	1: Mechanical Method		
	1: Mechanical Method			
K141	Adjustment of Close Force at Branch	-20~20		
	Tension Solenoid			
K142	Adjustment of Holding Force at	-40~40	1	0
	Branch Tension Solenoid			
K144	Motor Thread-separating Delay	-15~15	1	0
	(For Fang Zheng Only)			

No.	Parameters	Range	Unit	Default
K145	Motor Thread-trimming Delay	-10~10	1	0
	(For Fang Zheng Only)			
K150	Head Safety Switch	ON: Normal		0
	ON: Normal	OFF: Forbid		
	OFF: Forbid			
K168	Pressing foot action mode for sewing	0:Synchronous action with		0
	preparation	external pressure foot		
		1:Keep up		
K200	Restore Default Settings			
K241	Type Setting	0: Bar-tacking Machine		0
	Note: At changing the machine type,	5: 1906 Machine		
	the system will re-add the basic	7: Button Sewing Machine		
	patterns and delete the saved normal			
	patterns			

8.4 Counter Setting





No.	Function
1	Sewing Add Counter
2	Sewing Down Counter
3	Sewing Counter Off
4	Set Current Sewing Counter Value

5	Set the Setting Value of Sewing Counter							
6	No.of Pcs Add Counter							
7	No.of Pcs Down Counter							
8	No.of Pcs Counter Off							
9	Set Current No.of Pcs Counter Value							
10	Set the Setting Value of No.of Pcs Counter							

8.5 Change Sewing Mode



8.6 Have Access to Pattern Edition



8.7 Set Pattern Lock

NO.	Locking pattern select
In Setting Mode Level 1, press to	1 2 3 4
enter the interface for setting pattern lock,	
where the entire pattern number will be	
dislayed. 32 pattern numbers are in each	
page. For locking a pattern, user only	13 14 15 16 01/05
needs to press the pattern number. The	17 18 19 20
seelcted pattern numer will be displayed	21 22 23 24 ALL
in dark.	25 26 27 28
	29 30 31 32
Press to save the setting. The selected patterns will be locked.	

8.8 Initialization







8.9 Software Version Inquiry

At Mode Setting Level 2 Interface, user	QR
can press to check the software	Panel Ver.: TASC201-KD3-Z-v1.2.237
version of system.	Main-Control Ver: -MC-A-
	Main-Motor Ver.: -MM-A-
Save the Current version	Step-Motor-1 Ver.: -MD1-A-
	Step-Motor-2 Ver.: -MD2-A-
information to the root directory of U	Fs Ver.: TASC201-FS-Z-v1.0.57
disk.	Os Ver.: TASC201-OS-Z-v1.0.47
	Compiling Time : 2018-07-9

8.10 Test Mode











Click the columns under the interface of Continuous Running to set the Action interval and Origin Detection. Set the value with the number keys.

Press and step the pedal to start the continuous running. During the running, user can use the pause switch to stop machine or he can stop machine by stepping the pedal or pressing pause switch at action end

(7) XY Motor Origin Sensor Test

At Test Mode Interface, user can

press (107XY Motor Origin Test) to activate XY Motor/Origin Output Test Interface (as shown in right picture). If user turns on the machine without entering the Ready

Status and pressing to search the origin, user can directly press the direction keys to move the motor and display the On/Off statuses of Sensors at both XY sides. In this way, user can test the working condition of the XY Motor Driver and their sensors. If user enters the Ready Status after

power-on or presses to search origin, the user will have to press

to serach origin at each entry to the I07 mode in future so that he couuld use direction keys to move XY motors. This is the manual adjustment of the XY origin. The coordinates displayed at left is the





8.11 Keyboard Lock



((())) X 30.0 X% 100.0% Y] 20.0 **Y%** 100.0% **P**27 **P**28

- 3、 P Pattern Input Interface:
- 2) P Pattern Edition
- 2) P Pattern Copy
- 3) P Pattern Naming
- 4) Pattern Deletion
- 4、 P Pattern Sewing Interface:
- 1) Counter Setting
- 5、 C Pattern Data Input Interface:
- 6) C Patten Registration
- 7) C Pattern Copy
- 8) C Pattern Naming
- 9) C Pattern Edition
- 10) Pattern Deletion
- 6、 C Pattern Sewing Interface:
- 1) Counter Setting
- 7, parameter Setting Mode:
- 3) Level 1 Parameter
- 4) Level 2 Parameter
- 3) Counter edition
- 4) Test Mode
- 5): Pattern Lock Setting

8. 12 Parameter Back-up



press	Γ	Restore		to	reload	the
corre	spone	ding parar	neter	r valı	ues	
4	Press	[Clear]	to d	lelete	e all the s	aved
paran	neters	5				

8.13 Button-stitching Function Setting







8.14 Pattern Edition Parameter Setting



9 Controller System Principle

NO.	Patterns	Stite	Length × Width	NO.	Pattern	Stite	Length × Width
		h	(mm)			h	(mm)
		Num				Num	
		ber				ber	
1	*****	41	16.1×2	2	HIMANAN I	41	10.2×2
3	*****	41	16×2.4	4	*******	41	24×3
5	\$~~~	27	10.1×2	6	<mark>1~~~~~</mark>	27	16×2.4
7	9	35	10.1×2	8	*****	35	16×2.4
9	*****	55	24×3	10		63	24×3
11	₩₩₩	20	6.1×2.4	12	WWWW	27	6.2×2.4
13	<mark>ALULUUUM</mark>	35	6.1×2.4	14		14	8×2
15	MAAAAA	20	8×2	16		27	8×2
17	· · · · · · · · · · · · · · · · · · ·	20	10×0	18	· · · · · · · · · · · · · · · · · · ·	27	10×0
19		35	24.8×0	20		40	25.2×0
21		43	35×0	22	WWWW	27	4×20

9.1 List of Patterns in 1900A Controller

23	wwwww	35	4×20	24	1	MMMMMM	41	4×20
25	MANANANANAN	55	4×20	26	5	ļ	17	0×20
27		20	0×10	28	3		27	0×20
29		51	10.1×7	30	0		62	12.1×7
31		23	10.2×6	32	2		30	12×6
33		47	7×10	34	1		47	7×10
35		89	24×3	36	5	WWWW	27	8×2
37		25	11.8×12	38	3		45	12×12
39	www.	28	2.4×20	4()		38	2.4×25
41	*******	38	2.4×25	42	2	holomation	57	2.4×30
43	la materiaria manana se	75	2.4×30	44	1		41	2.4×30
45		89	8×8	46	5		98	8×8
47		86	8×8	48	3		100	8×8
49		129	8×8	50)		149	8×8

51		130	7.9×7.9	52	(T `	51	12.4×10.2
53	·D	50	12.4×10.2	54		52	21×6
55		57	21×6	56	*****	99	19×3
57		115	40×5	58		115	40×5
59		136	6.6x25	60		158	6.6x25
61		178	6.6x25	62	***	135	6.6x25
63		155	6.6x25	64		176	6.6x25
65		308	6x25	66		257	6x20
67		108	40×30	68		80	40×30
69		64	40×30	70		96	30×30
71		76	30×30	72		60	30×30
73		52	40×30	74		40	40×30
75		32	40×30	76		44	30×30
77		36	30×30	78		28	30×30

79		60	40×30	80	\bowtie	48	40×30
81		36	40×30	82		56	30×30
83		44	30×30	84	\mathbf{X}	67	40×30
85	\mathbf{X}	39	40×30	86	\mathbf{X}	35	30×30
87		145	16.2x16.2	88	HAR	153	12x12.4
89		74	20×24	90		54	20×24
91		65	20×20	92		49	20×20
93		39	20×20	94		63	25×20
95		51	25×20	96		45	25×20
97		42	25×20	98		33	25×20
99		27	25×20	100		88	30×25

9.2 List of Patterns in 1906A Controller

NO.	Patterns	Stite	Length × Width	NO.	Patterns	Stite	Length × Width
		h	(mm)			h	(mm)
		Num				Num	
		ber				ber	
1	******	41	16.1×2	2	******	41	10.2×2

3	********	41	16×2.4	4	*******	41	24×3
5	\$~~~~	27	10.1×2	6	1~~~~~	27	16×2.4
7	M.M.M.M	35	10.1×2	8	******	35	16×2.4
9	*****	55	24×3	10		63	24×3
11	₩₩₩	20	6.1×2.4	12	******	27	6.2×2.4
13	HHHHH	35	6.1×2.4	14	<mark>≻≁≁</mark> ×	14	8×2
15	MAAAAA	20	8×2	16		27	8×2
17		20	10×0	18	· · · · · · · · · · ·	27	10×0
19		35	24.8×0	20	,	40	25.2×0
21		43	35×0	22	WWWW	27	4×20
23	wwww	35	4×20	24	NWWWW	41	4×20
25	MANANANANA	55	4×20	26		17	0×20
27		20	0×10	28	-	27	0×20
29		51	10.1×7	30		62	12.1×7

31		23	10.2×6	32		30	12×6
33		47	7×10	34		47	7×10
35		89	24×3	36	******	27	8×2
37		25	11.8×12	38	\bigcirc	45	12×12
39	Marrie Marrie	28	2.4×20	40	WWWWW	38	2.4×25
41	******	38	2.4×25	42	himme	57	2.4×30
43	KONKONKAN	141	10×30	44	制州州州	122	10×30
45	Decision sectore	97	10×30	46	MANAN	109	10.1×30
47	MAMMAM	122	10.1×30	48		265	10×30
49		160	10x40	50		80	40×30
51		64	40×30	52		96	30×30
53		76	30×30	54		60	30×30
55		52	40×30	56		40	40×30
57		32	40×30	58		44	30×30

59		136	6.6x25	60		158	6.6x25
61		178	6.6x25	62	******	135	6.6x25
63		155	6.6x25	64		176	6.6x25
65		36	30×30	66		28	30×30
67		60	40×30	68		48	40×30
69		36	40×30	70		56	30×30
71		44	30×30	72		36	30×30
73	\mathbf{X}	67	40×30	74	\mathbf{X}	51	40×30
75	\mathbf{X}	39	40×30	76		55	30×30
77		43	30×30	78		35	30×30
79		42	30×30	80	HHHHHHHHH	145	16.2x16.2
81	HAR	153	12x12.4	82		103	30×25
83		82	30×25	84		80	20×30
85		80	30×20	86		74	20×24
87	115	40×5	88	115	40×5		
----	-----	-------	-----	-----	-------		
89	308	6×25	90	257	6×20		
91	65	20×20	92	49	20×20		
93	39	20×20	94	63	25×20		
95	51	25×20	96	45	25×20		
97	42	25×20	98	33	25×20		
99	102	60×50	100	128	60×50		

9.3List of Patterns in Button-sewing Controller

No.	Pattern	Threa	Standard	No.	Pattern	Thre	Standard
		d	Sewing Length			ad	Sewing Length
		Num	X(mm)			Num	X(mm)
		ber				ber	
1		18	3.6x3.8	2		22	3.6x3.8
3		26	3.6x3.8	4		30	3.6x3.8
5		24	3.8x3.9	6		26	3.5x3.8
7		30	3.5x3.8	8		34	3.5x3.8
9		19	4x4	10		22	3.7x3.9
11		26	3.7x3.9	12		18	3.6x3.8
13		22	3.6x3.8	14		26	3.6x3.8

No.	Pattern	Threa	Standard		No.	Pattern	Thre	Standard
		d	Sewing Length				ad	Sewing Length
		Num	X(mm)				Num	X(mm)
		ber					ber	
15		24	3.9x3.9		16		26	3.7x3.6
	Ś					S .		
17		30	3.7x3.6		18	\bigcirc	11	3.8x0.5
	S					9		
10	\frown	13	3 8×0 5		20	\frown	15	3 8×0 5
15			5.00.5		20			5.000.5
21	\frown	17	3 8×0 5		22	\frown	21	3 8×0 5
21		1	5.000.5				21	3.000.3
23		12	0.5x4.3		24		15	0.4x4.2
25		17	0.4x4.2		26		19	4x3.7
27		26	3.8x3.6		28	(P P)	24	4x3.7
29		30	3.9x3.7		30		20	3.2x2.8
						V		
31	\sim	29	3 2x2 8		32		20	3 2x2 8
51	$(\mathbf{\nabla})$	25	5.272.0		52		20	5.2.2.0
	J					\bigcirc		
33	A	29	3.2x2.8		34		19	4x3.8
	9					9		
35		22	3.6x3.8		36		24	3.7x3.8
	9			-		9		
37		26	3.6x3.8		38		19	3.9x3.8
	9							
39		22	3.7x3.9		40		19	3.8x3.8
	(Z)					B		
41	(A)	22	3.6x3.8		42		24	3.8x3.8
	B							
43		26	3 7x3 6		44	\frown	12	4 2x0 4
	(\mathfrak{S})					(C		
								1

No.	Pattern	Threa	Standard	No.	Pattern	Thre	Standard
		d	Sewing Length			ad	Sewing Length
		Num	X(mm)			Num	X(mm)
		ber				ber	
45		13	3.7x0.2	46		12	0.4x4.2
47		19	3.8x3.6	48		24	3.8x3.6
49	Ø	20	3.2x2.8	50		20	3.2x2.8

9.4 List of Warning

Code	Name	Release Method
E 001	Pedal is not at the middle	Check whether pedal is stepped at entering the
E-001	position.	Ready Sewing Interface
E-002	Machine is in emergency stop	Press to enter the Status of frame-moving at stop or press Reset Switch to trim thread and restart or return to origin.
E-003	Tilt of Machine Head Error	Press Enter. Machine can not run at status of head tilt. Please return to the normal position. The technician can use the short connect block to short the 2P blue plug on SC047A board.
E-004	Main voltage is too low (300V)	Turn off Machine
E-005	Main voltage is too high(300V)	Self-recovery
E-007	IPM over-voltage or over current	Turn off Machine
E-008	Voltage of assistant device (24V) is too high	Turn off Machine

E-009	Voltage of assistant device (24V) is too low	Turn off power. Please re-power the machine after a while. Meanwhile, user also has to ensure no short circuit at solenoids connecting X11 port.
E-010	Valve (fan) problem	Turn off Machine
E-012	Presser Position Abnormal	Please turn off the power and check the system hardware.
E-013	Encoder error or unconnected	Turn off power and check the connection at X5 port.
E-014	Motor running abnormal	Turn off Machine. Check the signal from motor encoder
E-015	Exceeds sewing area	Press Reset switch, and confirm the figure and X/Y scale rate. Activating Condition: Software Pattern Error
E-016	Needle bar upper position abnormal	Press The wrong stop position of main motor may be caused by the main shaft driver or the manual rotation. Turn the wheel to return the needle bar to the upper position.
E-017	Thread breakage detection error	Press
E-018	Knife position abnormal	Turn off power. Check the connecting condition of CZ024 on head signal board. If that is ok, please check trimming coupler.
E-019	Emergency switch is not at the right position	Self-recovery
E-020	Stepping software version error	Turn off machine. Make sure the used stepping board and the board program are correct
E-021	Machine is in emergency stop	Press Reset

	(Free)	
E-022	Machine is in emergency stop (Ready)	Press Reset
E-023	Thread-catching position error	Turn off Machine
E-024	Wrong connection between operation panel and sewing machine	Turn off Machine
E-025	X origin detection abnormal	Turn off power. Check the connecting condition of X9 port (on control box) and CZ021 port (on head signal board).
E-026	Y origin detection abnormal	Turn off power. Check the connecting condition of X9 port (on control box) and CZ022 port (on head signal board).
E-027	Presser origin detection abnormal	Turn off power. Check the connecting condition of X9 port (on control box) and CZ025 port (on head signal board).
E-028	Thread-catching origin detection abnormal	Turn off Machine
E-029	Intermediate presser origin detection abnormal	Turn off Machine
E-030	Stepping driver communication abnormal	Turn off power. Re-power the machine after a while. Check the condition of communication cable, mother board and driving board.
E-031	Stepping motor over-current	Turn off power. Re-power the machine after a while.
E-032	Stepping driver power supply abnormal	Turn off Machine

		Turn off machine. Check the condition of the
E-034	Abnormal current	main motor driving circuit, encoder response
		signal and mechanical load in order
		Turn off machine. Check the condition of the
E-035	IPM frequent over-current 1	main motor driving circuit, encoder response
		signal and mechanical load in order
		Turn off machine. Check the condition of the
E-036	IPM frequent over-current 2	main motor driving circuit, encoder response
		signal and mechanical load in order
E_027	Motor blockage 1	Press 🛹
E-037	Wiotor blockage 1	
		After the action order is sent to main motor, main
	Motor blockage 2	motor has to response. Check the 6-line PWM
E-038		wave of main motor driving circuit and response
		signal of encoder. At last, make sure the
		mechanism has no blockage.
E-039	Motor over speed	Turn off power and turn it on after a while
E-040	Stop over-current	Turn off Machine
E-041	Motor overload	Turn off Machine
E-042	Bus voltage abnormal	Press 🗾
	Thread-trimming motor origin	Press 🗾
E-043	abnormal	
	Head board EEPROM loading	Press 🗾
E-044	error	
E-045	Component abnormal	Turn off Machine
E-046	CRC checking error	Turn off Machine
E-047	Data checking error	Turn off Machine

E-048	X checking error	Communication error between main control board and stepping board
E-049	Y checking error	Communication error between main control board and stepping board
	MD1 stepping motor	Turn off machine and check the stepping driving
E-050	over-current	board and stepping motor
E-051	MD1 X direction not finish	Turn off machine. The main controller sends the new action order before the stepping device finish the current order.
		Turn off machine. The main controller sends the
E-052	MD1 Y direction not finish	new action order before the stepping device finish
		the current order.
F-053	MD2 stepping motor	Turn off machine and check the stepping driving
E-092	over-current	board and stepping motor
E-054	MD2 X direction not finish	Turn off machine. The main controller sends the new action order before the stepping device finish the current order.
		Turn off machine. The main controller sends the
E-055	MD2 Y direction not finish	new action order before the stepping device finish
		the current order.
E-254	Undefined error	Press 🗾
E 056	Stepping close loop DSP1	Diagon turn off the new or
E-030	communication error	
E 057	Stepping Close Loop DSP1 1 st	Diansa turn off the power
E-037	Route (X27) Over-current	Trease turn off the power.
E-058	Stepping Close Loop DSP1 1st	Dlesse turn off the power
E-058	Route (X27) Position Error	rease turn on the power.

E-059	Stepping Close Loop DSP1 1 st Route (X27) Over-speed	Please turn off the power.
E-060	Stepping Close Loop DSP1 2 nd Route (X25) Over-current	Please turn off the power.
E-061	Stepping Close Loop DSP1 2 nd Route (X25) Position Error	Please turn off the power.
E-062	Stepping Close Loop DSP1 2 nd Route (X25) Over-speed	Please turn off the power.
E-063	Stepping Close Loop DSP2 communication error	Please turn off the power.
E-064	Stepping Close Loop DSP2 1 st Route (X27) Over-current	Please turn off the power.
E-065	Stepping Close Loop DSP2 1 st Route (X27) Position Error	Please turn off the power.
E-066	Stepping Close Loop DSP2 1 st Route (X27) Over-speed	Please turn off the power.
E-067	Stepping Close Loop DSP2 2 nd Route (X25) Over-current	Please turn off the power.
E-068	Stepping Close Loop DSP2 2 nd Route (X25) Position Error	Please turn off the power.
E-069	Stepping Close Loop DSP2 2 nd Route (X25) Over-speed	Please turn off the power.
E-070	Step plate 90V power supply abnormal	Please turn off the power.
E-254	Undefined error	

9.5 Hint List

No.	Name	Content
M-001	Can not find pattern data	Please reload or input from design software

M-002	Set value too large	Please input value within range
M-003	Set value too small	Please input value within range
M-004	Parameter save error	Press Enter to recover default setting
M 005	Communication orman	Communication error between operation
M 005	Communication error	panel and control box
M-006	Fail to load letter sewing file	
M-007	Operation head not match to control	Please check the model and the software
M 007	box	version
M-008	Over Max stitch pitch	
M-009	Wrong password	Input again
M-010	Clock error	The hardware clock is down, please contact
M 010		manufacturer for repair
M-011	Letter sewing pattern saved	Enter the pattern selection interface and
M OII	successfully	generate new letter sewing pattern
M-012	SPAM initialization	Clear all the data within SRAM, please turn
W 012	SKAW Initialization	off machine and restore the DIP switch
M-013	Turning off	
M-014	USB is pulled out	USB is pulled out
M-015	Can not find pattern in U disk	
M-016		Periodical password has been set, can not
M 010	At least input one letter	change system time
M-017	No warning record	
M-018	Wrong user ID	Input again
M-019	Fail to confirm password	Input password again
M 020	Can not change gystem time	Periodical password has been set, can not
M 020	Can not change system time	change system time
M-021	Password file input error	
M-022	Password file load error	
M-023	Password save successful	

M-024	Clear all password failed	Can not delete password file
M-025	Fail to clear password	After clearance of password, the input of file
		has problem
M-026	Password file is deleted without	Password file is deleted without
	authorization	authorization, please turn off machine
M-027	User ID file damaged	
M-028	Can not input blank	Input password again
M-029	Current password not match	Input current password again
M-030	New password not match	Input new password again
M-031	Enter touching panel correction mode	Are You Sure? Yes: enter No: X
N 000	Correction successful	Correction is successful, please restart
M-032		machine
M-033	Correction failed	Please perform correction again
M-034	Clear warning record	Are You Sure? Yes: enter No: X
м 025	Periodical password is same to super	Input password again
M-035	password error	
M 0.96	Pattern data error	Current pattern data error, it will be replaced
M-030		by default patterns
M-037	Pattern information file open failed	Restore to default pattern configuration
M-038	Memory full	Please delete the unused patterns
M-039	Cover the pattern	Are You Sure? Yes: enter No: X
M-040	P pattern open error	Pattern file has mistake, it will be deleted
M-041	C pattern open error	Pattern file has mistake, it will be deleted
M-042	Pattern is existed	Can not replace the pattern
M-043	Delete pattern data	Press Enter to delete; Press ESC to quit
M-044	Delete the selected pattern	Are You Sure? Yes: enter No: X
M-045	Pattern is used, can not delete	Please release the quotation at P or C
		pattern
M-046	Save at least one pattern	Can not delete last pattern

M-047	Load default patterns	No pattern in memory, please load default
		patterns
M-048	No pattern in memory	Press Enter to load default patterns
M-049	Pattern number not exist	Please input again
M-050	P pattern not exist	Please create P pattern
M-051	Save software version successful	Software version is saved to the root
		directory of U disk
	Replace needle	Needle replacement set value is reached,
M-052		please replace needle
N 050	Replace oil	Oil replacement set value is reached, please
M-053		replace oil
N 054		Cleaning machine set value is reached,
M-054	Clean machine	please clean machine
M-055	Clear needle replacement set value	Are You Sure? Yes: enter No: X
M-056	Clear oil replacement set value	Are You Sure? Yes: enter No: X
M-057	Clear cleaning time value	Are You Sure? Yes: enter No: X
M-058	Clear production control value	Are You Sure? Yes: enter No: X
M-059	Clear calculated running time	Are You Sure? Yes: enter No: X
M-060	Clear calculated sewing number?	Are You Sure? Yes: enter No: X
M-061	Clear calculated power-on time?	Are You Sure? Yes: enter No: X
N 000	Clear calculated sewing stitch	Are You Sure? Yes: enter No: X
M-062	number?	
M-063	Clear calculated over-current times?	Are You Sure? Yes: enter No: X
M-064	Clear calculated stop times?	Are You Sure? Yes: enter No: X
M-065	Edit new pattern?	Are You Sure? Yes: enter No: X
M-066	Return to sewing mode?	Are You Sure? Yes: enter No: X
M-067	Restore all the settings	Are You Sure? Yes: enter No: X
M-068	Restore the selected items	Are You Sure? Yes: enter No: X
M-069	Not select an item	Please select one or several parameters

M-070	Sewing counter reaches set value	Please pres Enter to clear it
M-071	No.of pcs counter reaches set value	Please pres Enter to clear it
M-072	Successful	Current operation is successful
M-073	Failed	Current operation is failed
M-074	Copy failed	Check the room of memory
M-075	Copy failed	Check whether the U disk is pulled out
M-076	File I/O error	File I/O error
M-077	Verification failed at updating main	
MOTT	software	
M-078	Can not delete pattern data	The selected sewing data is in use
M-079	Perform parameter transfer	Are You Sure? Yes: enter No: X
M-080	Can not open changed pattern	Please confirm pattern file
M-081	Changed pattern format error	Please confirm pattern file
M-082	Changed pattern data is too long	Please confirm pattern file
M-083	Update successful	Update successful, please restart machine
M-084	Fail to open file	Fail to open file
M-085	Parameter restoration successful	Parameter restoration successful, please
M 000		restart machine
M-086	Not select update item	Please select at least one item for update
		If the item has no update file, the system will
M-087	Selected item for update is not existed	cancel the selection. If user wants to update
		the rest, please confirm again
		Press Enter to perform operation; Press ESC
M-088	Initialize U disk	to quit. The initialization will delete all the
		files in U disk
		Press Enter to perform operation; Press ESC
M-089	Initialize memory	to quit. The initialization will delete all the
		files in memory
M-090	Low memory	

M-091	Fail to select the function	
M-092	Shape point repeated error	
M-093	Can not return	
M-094	Can not find next stitch sewing data	
M-095	Can not find previous stitch sewing	
	data	
M-096	Pattern data is too big	
M-097	Calculation error	
M-098	Pattern-designing error	
M-099	Cannot find the pattern	
M-100	Over moving range	
M-101	Over sewing range	Make sure pattern within sewing range
M-102	Stitch number over range	Reduce stitch number
M-103	Pattern file error	
M-104	Confirm to change point	
M-105	Confirm to insert auto trimming code	
M-106	Delete new pattern?	Press Enter to confirm; Press ESC to quit
M-107	Delete elements?	Press Enter to confirm; Press ESC to quit
M-108	Confirm to perform?	Press Enter to confirm; Press ESC to quit
M-109	Delete mechanical control order?	Press Enter to confirm; Press ESC to quit
M-110	Delete needle entry point	Press Enter to confirm; Press ESC to quit
M-111	Are you sure to move presser?	Press Enter to confirm; Press ESC to quit
M-112	Delete shape point	Press Enter to confirm; Press ESC to quit
M-113	Warning: Initialization will delete	Press Enter to confirm; Press ESC to quit
	entire data in memory!	
M-114	Change model?	Press Enter to confirm; Press ESC to quit
M-115	Pattern is locked	Please unlock first
M-116	Can not modify basic pattern	
M-117	Turn off machine.	Current operation is finished, please restart

		machine
M-118	Can not modify counter	At modification, please turn off setting
M-119	Load basic pattern	Press ENTER to load basic pattern, don't
		turn off machine !
M-120	Restore to default setting?	Press Enter to confirm; Press ESC to quit
M-121	Clear entire custom parameters?	Are You Sure? Yes: enter No: X
M-122	Head board parameter error	Press ENTER to restore to default values
M-123	Pattern calculation error	
M-124	Delete all the P and C patterns	Press Enter to confirm; Press ESC to quit
M-125	Restore head board parameters?	Are You Sure? Yes: enter No: X
M-126	Over setting range	
		This operation is only available for
M-127	Can not find customized pattern	customized pattern. The basic pattern can
		not be outputted!
M-128	Outer presser is at upper position	Please lower the presser to perform the
		operation!
M-129	Can not perform right operation	
M-130	Can not find USB	Pleas insert U disk containing mp3 file
		Please put vid.avi file into pdat directory in
M-131	No video files in vid.avi	U disk and then enter the update interface to
		update video files

9.6 Structure of Control System

9.6.1Installation Size of Control Box







9.6.2 Installation Size of Operation Box



the front

the back



The side (USB)

9.6.3 The Control System Diagram

1、TASC201-2J/Z

