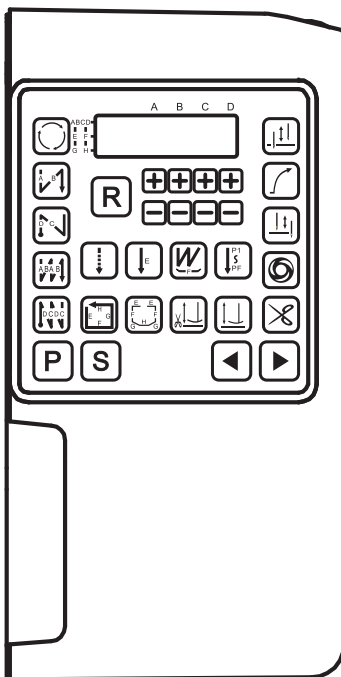


Integrated Sewing Machine Industrial Sewing Machine Servo Control System

Usage manual



In order to safely use this product, please read this manual carefully before using

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1、 Safety precaution

Operating purpose: servo motor is designed and used for the industrial sewing machine, if use for any other purpose, please take extreme caution for the user safety.

1). Working environment:

- ▲use power voltage indicated on the name plate of the motor or control box in $\pm 10\%$ ranges.
- ▲To avoid the false operation, please keep the product away from the high electromagnetic machinery or electro pulse generator.
- ▲Please operate the produce in the room temperature is 5°C above or 45°C under.
- ▲Don't operate near the flammable gas or explosive area.

2). Installation

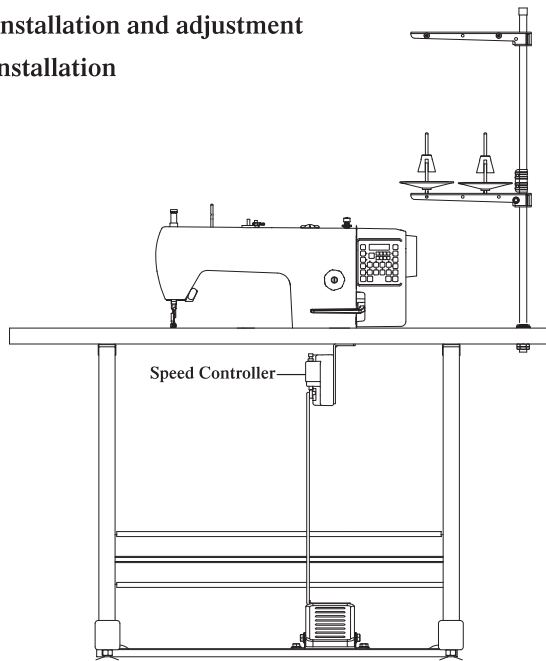
- ▲Motor and control box must be installed in accord with the correct instruction of the manual.
- ▲Turn off the power and unplug the cord before any installation or adjustment.
- ▲Don't set the power cord near all the actionable bodies
- ▲To avoid the static interference and current leakage,all grouding must be done.

3). Safety information

- ▲Turn off the power before any maintenance or repair.
- ▲Make sure the power off before turning over the machine head or changing the needle、 bobbin or threading.
- ▲High voltage inside the control box! After the machine is turned on, use low speed to operate first and check the correct rotation direction.
- ▲Do not touch the handwheel, needle and thread take-up lever during sewing.
- ▲All moving parts must use the protective device to avoid the body contact and the objects insertion.
- ▲If water or other liquids, and corrosive substances come into contact with the control box or motor, stop immediately and turn off, then let the trained person solve it.
- ▲All connectors must not be hot-swappable.
- ▲plug moderate force moderate, plug should be inserted in place, the lock should be locked. Press and hold to unlock device when unplugging, pinch the connector for plugging. Do not shake the connector、 strong cable.

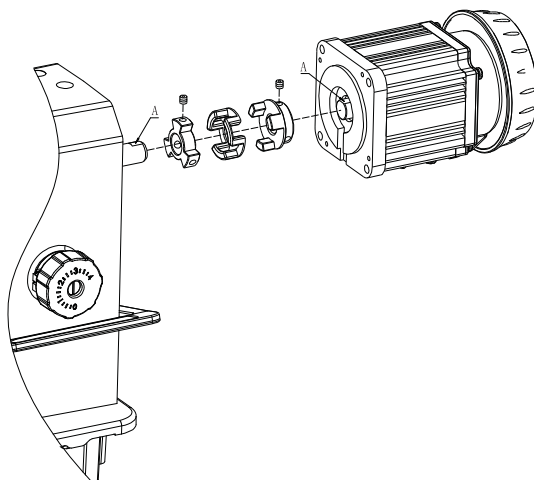
2、 Machine installation and adjustment

1). Machine installation



2). Installation for direct-drive motor and hand wheel

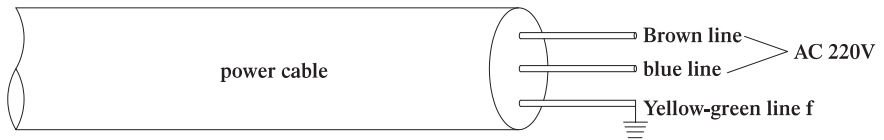
The motor is installed with the plane of the hand wheel mounted on the motor and the positioning plane of the machine is straight line installation, as shown: A to the A-oriented installation.



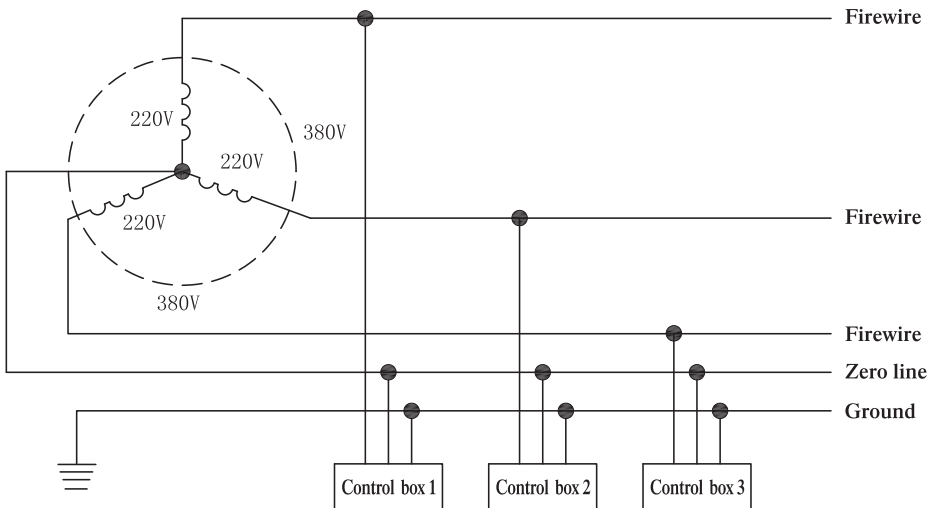
3、 Power connection

1). Single-phase 220V power wiring

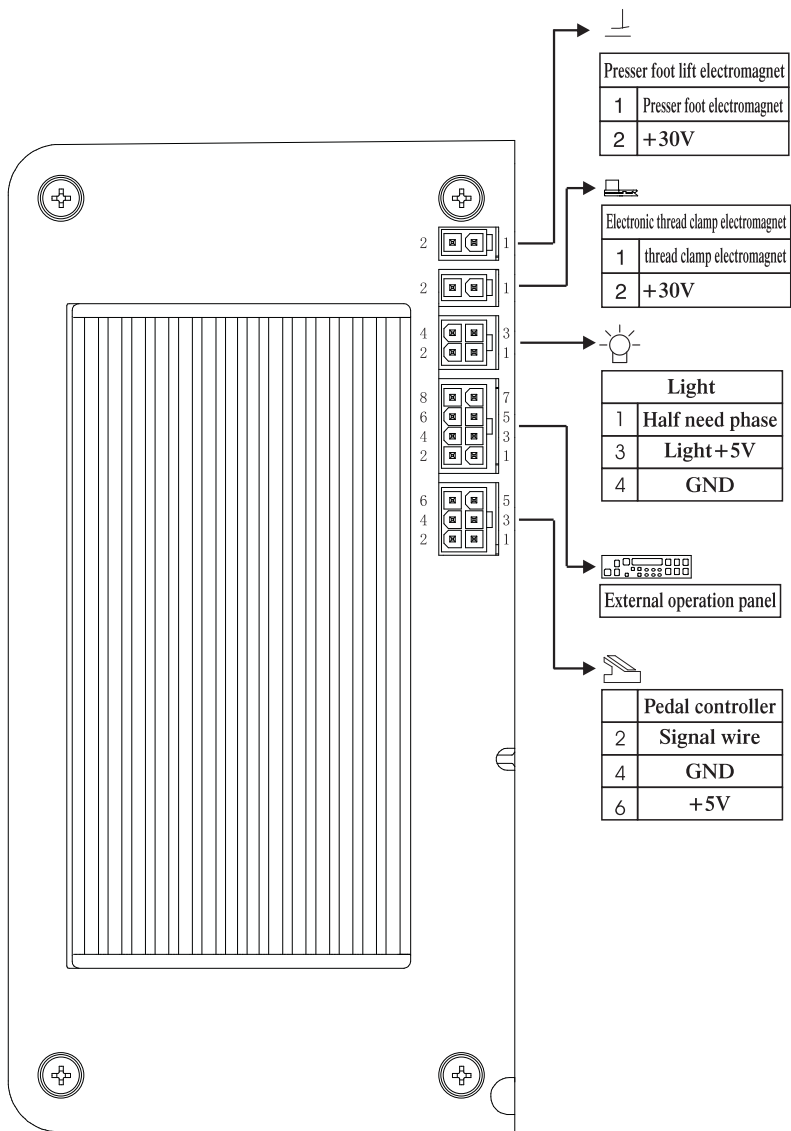
Yellow-green line for the ground line, be sure to ensure reliable grounding.



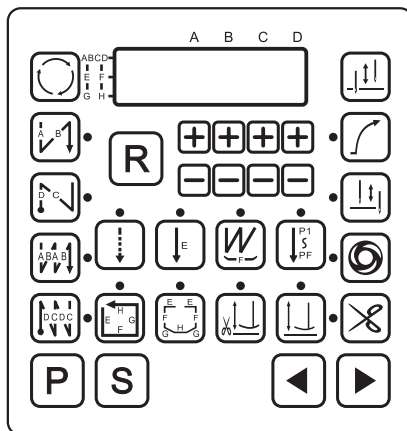
2). Three phase 4 wire 380V power connection



4、Terminal block diagram








5、 Key function on panel board









1). Sewing mode selection

Function	Key	Sewing action instructions
Start/End back tack selection		Double start back tacking
		Single start back tacking
		Double end back tacking
		Single end back tacking
Free sewing		<ol style="list-style-type: none"> 1. When pedal forward, machine will start sewing. Once the pedal returns to neutral, machine will stop immediately. 2. Step back on pedal, the trimming cycle will be finished automatically.
Multiple bar tacking		<ol style="list-style-type: none"> 1. When the pedal is stepped forward, the continuous seam action is performed automatically, and the number of return times is determined by D. 2. Note: When the back stitch start, automatically perform the action of continuous seam until the trimming is finished, the sewing will not stopped until step back the pedal and cancel the action.

<p>Constant stitch sewing</p>		<ol style="list-style-type: none"> 1. When pedal forward, it operate the E.F or G.H stitches. 2. When the pedal to the neutral position, immediately stop sewing position, and then forward again when completed E. F or G. H incomplete number of stitches. 3. When the parameter [010.ACD] is set to on, terminating the back seam or the trimming and the sweep line will be completed automatically after finished the last constant stitch sewing. 4. Stop halfway or in the sewing process, if step back pedal, will forced to terminate, and automatically complete the trimming, sweep line and other actions.
<p>Multi-seam</p>		<p>When the parameter[032. BAR]is set to 0, this button light is in octagonal seam state. When the parameter[032. BAR] is set to, the button light is in multistage sewing state, the maximum setting is 15 segment.</p>
<p>Stitch setting selection</p>		<p>Press this button to select the upper/middle/lower stitches setting and window display.</p> <p>Means the previous paragraph A. B. C. D.</p> <p>Means the middle paragraph E.F</p> <p>Means the low paragraph G.H</p> <p>A,B,C,D Four paragraph, stitches can be set through 0-9</p> <p>E.F,G,H stitches can be set through 0-99</p>
<p>Needle lift / Half needle</p>		<ol style="list-style-type: none"> 1. In free sewing style: press one time it has needle lift or half stitch function. 2. In constant stitches style (not include multi-seam) <ol style="list-style-type: none"> 1). if machine stop during sewing, press one time makes needle lift 2). When machine stop after sewing, press one time makes half stitch.
<p>Counting display</p>		<p>Under the general sewing interface, press and hold the S key to display[PN.022]to 22, release to display the general sewing interface.</p>

2). Function setting

Sewing function setting selection: Automatic, trimming, Stop stitch position, slow start, halfway press foot lifter, Press foot lifter at trimming.











Function	Key	Sewing action instruction
AUTO		<ol style="list-style-type: none"> 1. In the process of free sewing, press this button buzzer will only sound, no function, LED is not bright. 2. During constant stitch sewing, press this button: <ol style="list-style-type: none"> 1). When the pedal is stepped forward, the number of stitches set in E. F section or G. H section is automatically executed, and stopped after the number of stitches in the section is completed. 2). Then one by one pedal forward, which automatically executes the next paragraph set the number of stitches until the completion of the tangent /sweep automatically.
Trimmer switch		Set the trimming function. LED light means to use trimming function, LED off means to close this function.
Needle up / down when motor stop		Needle stop setting LED ON= Stop at UP position LED OFF=Stop at DOWN position
Soft startsetting button		Soft start setting button, LED Light on means function on, LED light off means function off.
Presser foot up / down when motor stop		Presser foot action when motor stop LED ON=Motor stop, presser foot goes up automatically. LED OFF=Presser Foot not active when motor stop.
Presser foot up / down after trimming cycle		Presser Foot action after trimming LED ON= Automatic lift the presser foot after trimming LED OFF=Presser foot not active after trimming.

6、 Key function on panel board

The servo control system has several parameters can be modified, arranged in a certain order. Specific parameters, item Contents, Chinese Name, Range, Initial Value and Setting Contents Numerical description is described in Appendix “system function Parameter table” . Function parameters are divided into user parameters A zone includes(1-45)and system parameters B zone (Including 46-79) , all the parameters are set in the operation panel.

1).Key function definition


System enter the “parameter setting” , the keys on the operation panel has been redefined, different meaning from the original, Specifically defined as follows:

Key value	Meaning	Notes
	Parameter number plus 1	Parameter number will increment continuously while holding the button
	Parameter number minus 1	Parameter number will decreases continuously while holding the button
	The contents of the selected parameter number To view or save	Press this key after selecting the parameter number to view or modify the parameters. Press this key to exit and save after you modify the parameter
	Enter or Exit Function to edit parameter	Press this key for 2-3 seconds under general sewing interface to enter parameter edit status Press this key for 2-3 seconds in parameter edit state to exit to general sewing interface
 	Increase and minus keys, modify parameter content values	The corresponding key modification multiples are 1000 The corresponding key modification multiples are 100 The corresponding key modification multiples are 10 The corresponding key modification multiples are 1
 	Reduce speed	 Reduce speed  Improve speed




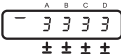
7、 All sewing style setting

1. Free sewing style setting


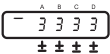




1). How to set free sewing

After powering the button in the standby mode , press  digital tube light on, that is free sewing state, then slight forward the pedal, free sewing style automatic performed. when the pedal is in natural position means stop sewing, forward the pedal the machine will trimming and sweeping thread automatically.

2). How to set start/back tacking(bartack)times and stitches:


When it is free sewing or constant stitch sewing or multi-seam ,  this button is on means single start back tacking,  this button is on means Double start back tacking. start back tacking stitches can be set , press  Digital tube light on, the display shows  the number corresponding to A B as the starting back tacking stitches, C. D corresponds to the stitches of end back tacking, the number of stitches adjusted according to the number keys “ ± ” .

3). Switch key function setting:

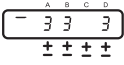
When it is free sewing mode, press  up digital tube light on, the display show  this is start/end back tacking stitches, then again press  down digital tube light on, he display shows  it means current motor running speed, then press  down digital tube light on, display shows  this is motor from start running to stop running run how many stitches, from the above panel you can read the motor run 22 stitches.

2. Multiple bar tacking setting:


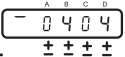

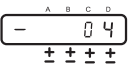
1). How to set multiple bar tacking:

When it is standby mode this button  light is on, means it is multiple bar tacking mode, forward press the pedal. multiple bar tacking function automatic performed.

2). How to set the multiple bar tacking times and stitches, parameter[032. BAR] is 0 (max number of times is 0, max stitches is 9)


When it is multiple bar tacking mode, the display shows  , the number corresponding to A B is stitches, the number corresponding to D is multiple bar tacking times, stitches and multiple bar tacking times can be adjust through the button“±”

3). How to set the multiple bar tacking times and stitches, parameter [032. BAR] is 1(max number of times is 19, max stitches is 99)

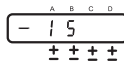
In the continuous back seam state, through the  switch key to switch to the upper section of LED light on, screen display  , a,b and c,d corresponding to the numbers of stitches, through the  switch key switch to the middle section led light screen display  , c,d the corresponding number of times

3. Constant stitch sewing setting :






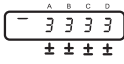
1). How to set constant stitch sewing:

When it is standby mode, press  , this light is on means It is in constant stitch sewing mode, forward press the pedal means after set the stitches, automatic trimming and sweeping thread.

2). How to set constant stitch sewing stitches:


when it is constant stitch sewing, the screen shows  , the number means the number of constant stitch sewing, max is 99 stitches, adjust through the ± button under A,B.

3). How to adjust the start and end back tack stitches, times of constant stitch sewing :


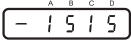
In constant stitch sewing state, press corresponding key  or  if need 1 or 2 times start back tack sewing. press corresponding key  or  if need 1 or 2 times end back tack sewing, adjust the needle of start and end back tack through toggle Key  switch to upper section LED light is on, screen display  at this time, A. B corresponding the stitch number of start back tack, C. D corresponds to the stitch number of end back tack, adjust through ± key.


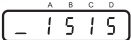
4. Four segment seam setting:

1). How to set four-segment seam:

In standby state, the key light  is on meaning that 4 segment seaming state, at this time each step forward will completed a piece of sewing, the 4th segment automatically complete the tangent, sweep line action.


2). How to set the stitches numbers of each segment:

In the 4 segment seaming state, through the switching key  switch to Middle LED light is on, the screen display  at this time, The corresponding number of A.B is the stitches number in the first E segment, The corresponding number of C.D is the second F segment


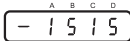
stitch number, by corresponding to the following ± key to adjust the stitches number, maximum 99 stitches each segment At this time through the switch key  to the next section led light is on, screen display  The A.B corresponds to stitches number of third G segment,

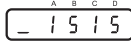
and the C. D corresponds to the number of stitches in the fourth segment H, and the method of stitch number adjusting is the same as the first and second segment. The starting and terminating back tacking adjustment method is same as the set stitch seaming.

5. The setting of 7 segment sewing

1). In standby state,  key light is on meaning on 7 segment sewing state, At this time every step of the pedal is completed a piece of sewing, after 7 segment sewing stop, will automatically complete the tangent, sweep line.


2). How to set the number of stitches per segment:

In the 7 segment sewing state, through the switch key  switch to the middle section led light is on, at this time the display screen  ,A,B corresponds to the number is the first segment (E segment), also is the 7th segment; The corresponding number of C.D is the

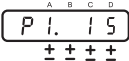
second segment (F segment) and also is the sixth segment. Switch to the under LED light is on through ± key, screen display  . At this time the corresponding number of A.B is the third segment (G segment) is also the 5th segment, C. D corresponds to the number 4th (H segment), stitch number adjustment same as E. F segment. Start and End the back tack adjustment method as same as constant stitch sewing, the setting adjustment of the 4 segment can be same as 7 segment sewing.

6. The setting of multi-segment sewing:

1). How to enter the interface of multi-segment sewing:



In standby state, enter the user parameter 032, BAR, press S key to enter and modify the parameter 0 to 1 or 2 then confirm and exit. After modifying, need to power off for 10 seconds to reboot and takes effect, when the key  light is on which meaning in multi segment sewing state.

2). How to set the number of stitches in multiple segments :

In the state of multi segment sewing, screen display . At this time A corresponds to the following numbers. Through ± key can adjust the number of segment, from P1-PF total 15 segments, B. C.D The corresponding number is the number of stitches, through ± key can adjust the number of stitches, maximum 200 stitches adjustable. (Notes: the stitch number should adjust to 0 behind no required segment.)

7. Speed setting:

1). How to set the speed:

Press and hold  key, reduce speed • Press and hold  key, increase speed, each press 50 rpm.


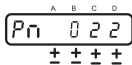


8. Hand movement back stitch speed reduce adjustment :

make thick material under high speed back stitch, needles and threads are easily broke



Hand movement back stitch work according to [006. B] parameter

Hand movement back stitch High speed operation, no deceleration

9. The display function of processing number :

Press and hold  key under General sewing interface, will display 
(will Show General Sewing Interface when released). When the  key is not released, then hold the  key, “pn.0” says the piecework is starting from 0 pieces.

10. Electronic thread clamp Quick switch:

Click the  key to close and click the  key to open

11. Quick trimming function adjustment: [064.HHC]

OFF: The auto presser foot lifter function will only work with full backward press the pedal.

ON: Change presser foot lifter function to trimming function.

Equipped with automatic presser foot machine cannot use this function, need set OFF.

12. Refer and adjust the needle on the top after trimming: [070. L2]

While make thick material, lift presser foot up, needle doesn't back to the top, fabric will touch the needle.

0: OFF

1~280: Can be set between 1-280, general highest set 200

Note: 1. Must set 0 to close the function When adjusting the trimming cam mechanisms,;

2. Turn on the function, sewing again may cause unstitched, please re-adjust the trimming thread length .

13. Pedal reaction speed adjustment: [034. BRN]. [052. PA]



[034. BRN]: Response sensitivity adjustment in slow region. Parameter content: can be set between 20-200, the smaller value means higher speed reaction, the higher value means the slower reaction.

[052. PA]: Speed adjustment from the start to the highest speed. Parameter: Can be set between 50-800, the smaller number means high speed reactio, the higher value means the faster the reaction speed.

14. Integrated machine operator panel has the function of electronic thread clamp switch

Directly operate on the panel, click the  key to open, and then click the  key to close.

15. up needle position adjustment:

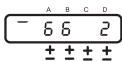
Power on, step pedal forward, and then step back to cutting, if the position is wrong, with the hands adjust handwheel to stop at the best needle position, and then hold  and , release the keys after three seconds, the first digital tube has a "A" in the flashing, indicating that the needle bit has been determined successfully.



16. The adjustment of the bar-tacking stitches:

While using lockstitch machine, need adjust the compensation for the synchronous alignment of the front and back bar-tacking, The compensation method of front bar-tacking, back bar-tacking, Continuous bar-tacking is basically consistent, The compensation adjustment of the synchronous leveling of the continuous bar-tacking is illustrated as an example.

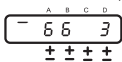
The compensation parameter of front bar-tacking as [018BT1] and [019BT2] compensation value, Continuously presses the P key 2-3 seconds, enters the user parameter, find [018bt1] and [019bt2], may fix the stitches of front bar-tacking. Back bar-tacking parameter is [025bt3] and [026bt4], the continuous bar-tacking parameter is [035bt5] and [036BT6], pls see user parameter table.



Parameter 1: In the  seam function, set 6 stitches, the number of times set as 2, for example:



Phenomenon	Adjustment
 <p>Starting point</p>	(The stitch number in A segment is more than set number, resulting can not back seam to the starting point of B segment) B segment is short, Please adjust [035.bt5] content value from 1-31 for appropriate adjustment, in the original figure, should increase the number adjustment.
 <p>Starting point</p>	(The stitch number of B segment is more than the set number, resulting when it exceeds the starting point) B segment is long, please adjust the [035.bt5] content value from 1-31 for appropriate adjustment, in the original figure, should reduce the number adjustment.

Parameter 2): After adjusted the above set 2 times, increase 1 time set, set as 3, for example:



Phenomenon	Adjustment
 <p>Starting point</p>	C Segment stitch number is less than set number, resulting in C segment can not be back to the beginning of b paragraph short) c segment is short, please adjust [036.bt6] content value from 1-31 for appropriate adjustment, In the existing figures, should increase the number adjustment.
 <p>Starting point</p>	C segment stitch number more than set number, causing the C segment can not be back to the beginning of the B segment. C segment is long, please adjust 036.bt6] content from 1-31 to make appropriate adjustments, In the existing figures, the number adjustment should be reduced.

After adjusting the above parameters, 1/8 stitches as unit

Adjust the [018.bt1] parameter to the same parameter as [035.BT5];

Adjust the [019.bt2] parameter to the same parameters as [036.bt6];

Adjust the [025.BT3] parameter to the same parameter as [036.BT6];

Adjust the [026.BT4] parameter to the same parameters as [035.BT5]

17. How to enter user parameters and system parameters:

Standby state after Pedal backward and trimming , press and hold the P key 2-3 seconds, you can enter the user parameter A area, you can modify the parameters of No. 001 — 045, press s key to confirm,save and hold the P key 2-3 seconds to exit.

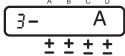
In the shutdown state, press and hold the P key, system power on, immediately put off the P key, the display show 046DIR], you can enter the system parameter B, modified No. 046-079 parameters, press s key to confirm save and then press p key and hold 2-3 seconds to exit. The user parameter a area can also be modified when the parameter B of the system is entered.

Note: Enter the parameter area to find the parameter number need to be modified, then press S key to modify the interface, and then Modify the corresponding content, press s key to confirm and save then take effects.

18. How to Restore factory settings:

1). Shutdown state press S Key, system power on, at the same time the panel display the last two digits to“08”and then press s key to confirm that the parameter number from 080 to “096, RS” (Note: 08, 0 does not show on panel).

Then press s key into No. 096 parameter content Modify the interface, change the parameter content to“5550”press s key and press p key hold 2-3 seconds to exit.

2). While holding down the P button and S button, the system on the power,  the first(3-) in the non-stop flashing, indicating that has been successfully restored, note: If (3-) don't flashing, meaning the Panel does not support this method to restore settings.

Note: Both of the above methods can restore the factory settings .

8、Seven-segment display font and actual numeric font comparison

1). Digital Font part

Actual value	0	1	2	3	4	5	6	7	8	9
LCD display	0	1	2	3	4	5	6	7	8	9

2). English font part

English alphabet	A	B	C	D	E	F	G	H	I	J
LCD display	A	b	C	d	E	F	G	H	i	J
English alphabet	K	L	M	N	O	P	Q	R	S	T
LCD display	t	L	n	n	o	P	q	r	S	t
English alphabet	U	V	W	X	Y	Z				
LCD display	U	v	W	X	Y	Z				

Note: Appendix A function Parameter form

1、User parameter A area

Parameter Item contents	Name	Range	Initial value	Set Content Value Description
[001. H]	R/min max speed	150~4000	3500	Maximum speed setting for sewing machine, related to model
[002.PSL]	Acceleration curve speed Adjustment	1~100	70%	Acceleration Ramp setting of Controller
[003.NUD]	Needle Stop Location Selection	UP/DN	DN	Up stop position and down stop position
[004. N]	Start back stitch speed	150~2800	1800	Speed setting of starting back tack
[005. V]	Stop Back stitch speed	150~2800	1800	Speed setting of end back tack
[006. B]	Continuous back stitch speed	150~2800	1800	Speed setting of multi seam
[007. S]	Slow start stitch speed	150~2800	600	Speed setting of soft start
[008.SLS]	Slow start stitch number	0~99	2	Stitch number setting for slow starting seam
[009. A]	Automatic stitching Speed	300~4000	3200	Press Auto button on Operation panel Box to set speed setting
[010.ACD]	After constant stitch sewing Automatic termination of the back-stitch function (no complement pin function setting)	OFF/ON	ON	ON: After the final stitch is executed, the terminating stitch will be performed automatically. That is, in any sewing mode, the termination of the back seam can not be used. OFF: After the completion of the final fixed stitch, it will be unable to automatically perform the end back tack function. Must complete the action again of full front or behind step the whole behind step, then the back stitch function can be used.
[011.RVM]	Functional mode selection during manual back-tack .	JUK/BRO	JUK	Hand press back seam switch action timing, Juki: Juki mode (i.e. there are actions in the sewing and stopping), Bro: brother mode (i.e. act during the sewing)

[012.SMS]	Selection of motion mode for starting back tack	A/M	A	A: Light touch pedal, that is , the automatic execution of fixed Stitch. M: Controlled by pedal, can stop and start arbitrarily.
[013.TYS]	Operation mode selection after starting back seam	CON/STP	CON	CON: After start back tack, it automatic continue to sew the next stitches. STP: Automatically stop when the number of stitches is completed in the start back stitch.
[015.SBA]	Loose thread,thread cutting magnetic, Periodic signal	5~15	10	Actually the size of the electromagnet is adjusted, the larger number, the greater strength.
[018.BT1]	Start Back Stitch Compensation 1	Advance action:1~16	8	BT1, BT2=0 invalid
[019.BT2]	Start Back Stitch Compensation 2	Deferred Action:17~31	5	BT1, BT2=1~16 Early action timing (1/8 stitches) BT1, BT2=17~31 Delayed action Timing (1/8 stitches)
[020.SME]	Selection of motion mode for end back tack	A/M	A	A: Light touch pedal, automatic needle stitch operation M: Controlled by pedal, can stop and start arbitrarily
[025.BTS]	End back tack Compensation 3	Advance action:1~16	5	BT3, BT4=0 Invalid BT3, BT4=1~16 Early action timing (1/8 stitches) BT3, BT4=17~31 Delayed action Timing (1/8 stitches)
[026.BT4]	End Back Stitch Compensation 4	Deferred Action:17~31	8	
[028.PN5]	Piecework setting	1~100	1	1~100: thread cutting times is operated according to the parameter setting, counting value increased 1 pieces, counting display [044. PN]
[030.BCC]	Add one more stitch when end back tack part C	OFF/ON	OFF	Add one more stitch when end back tack part C ON: Valid OFF: invalid
[031.SMB]	Selection of motion mode for multi seam	A/M	A	A: Light touch pedal, automatic needle stitch operation M: Controlled by pedal, can stop and start arbitrarily

[032.BAR]	Continuous back stitch settings	0/1/2	0	<p>0: Continuous back stitch A,B-D times (maximum 9 stitches), defined as E, F, G, H and H, G, F, E operation, no P1-PF mode of operation</p> <p>1: Continuous back stitch AB, CD-F times (max 99 stitches) with P1-PF operation mode</p> <p>2: Continuous back stitch A, B +C D (max 9 stitches) with P1-PF operating mode</p> <p>Note: After this parameter is modified, the power outage will take 10 seconds to restart.</p>
[034.BPN]	Pedal to the slow speed zone Response Sensitivity settings	20~200	150	<p>20: The front step fastest response speed</p> <p>200: The front step slowest response speed</p>
[035.BT5]	Continuous Back stitch compensation 5	Advance action:1~16 Deferred Action:17~31	8	<p>BTS, BT6=0 Invalid</p> <p>BTS, BT6=1~16 Early action timing (1/8 stitches)</p> <p>BTS, BT6=17~31 Delayed action Timing (1/8 stitches)</p>
[036.BT6]	Continuous Back stitch compensation 6		5	
[038. PM]	Speed of and-point-back seam High speed settings	OFF/ON	OFF	<p>OFF: Manual back Stitch phase speed is in accordance with[006. B] spin down to run</p> <p>ON: Manual back seam stage high speed operation, no deceleration</p>
[039. PS]	Back Stitch button with complement function	0/1	0	<p>[011.RVM] Valid in bro mode:</p> <p>0: The Back stitch button does not function as a complement</p> <p>1: Back Stitch button as a complement function</p>
[040.WON]	<p>1. Sweep Line output function</p> <p>2. Electronic clamp function of needle starting</p>	0/1/2/3	2	<p>0: Shut down</p> <p>1: Sweep line Action</p> <p>2: The Needle Electronic Clamp action (angle Control by 067. T1, 068.T2)</p> <p>3: Have sweep line action, grasping line function action, grasping line function independent electromagnet loses GPI013 port (clip line start time, angle control by 067. T 1, 068.T2)</p> <p>Note: This parameter is determined by the model</p>

[042.PSM]	When the seam stops, the presser foot output chooses	OFF/ON	OFF	OFF: Cancel the lift presser foot function
[043.FTM]	When the finish line stops, the presser foot output chooses	OFF/ON	OFF	OFF: Cancel the lift presser foot function
[044.PN]	Number of sewing finished pieces display	0~9999	0	According to [028.PN5] Piecework parameter settings, displays the number of cumulative complete pieces automatically
[045.SSS]	Slow start seam function selection	OFF/ON	OFF	To cancel the slow start stitch function

2、System parameter B area

Parameter Item contents	Name	Range	Initial value	Set Content Value Description
[046.DIR]	Motor rotation direction set (forward and backward)	CW/CCW	CCW	CCW: Counterclockwise direction CW: Clockwise direction
[048.SYM]	Synchronizer Model setting	0~3	3	O: HOHSING3 H-type Synchronizer, compatible with HOHSING3 S-type Synchronizer, only 0-point signal, the lower needle position, the top needle position required [076. DRU]. [078. Uru] Set needle position angle (based on 0 points)
[049.SPD]	Size of the front belt pulley	50~200	75	Set as the model no of machine, Preset Front belt pulley dimensions
[050.MPD]	Dimensions of motor pulley	50~150	80	Set as the model no of machine, Preset Front belt pulley dimensions
[052.PA]	Step forward Sewing Speed Response Sensitivity setting	50~800	100	50: Speed with pedal response slowest 800: Speed as the pedal responds fastest Can be set according to operator proficiency level
[054.BK]	Brake lock function when motor stops	OFF/ON	OFF	ON: When the motor stops, the brakes are locked. OFF: no effects
[055.TOT]	UTD=ON, Motor Operation Total Limited Time	1~800Hrs	8	Up to 33 days (800 hours)
[056.TM1]	UTD=ON, Motor Running time	1~60s	3	Free seam working time during automatic test
[057.TM2]	UTD=ON, Motor Stop Time	1~60s	3	Interval of time between automated test runs

[058.UTD]	Automatic Running test function	OFF/ON	OFF	This parameter is set to ON, the automatic running test begins, and run the sewing mode set by the selection needle box
[059. T]	Speed setting of trimming and sewing stop.	120~400	250	Speed adjustment of trimming stop, Low speed may lead to abnormal trimming, too high speed may lead to unstable positioning control
[060. L]	Low Speed	120~400	200	Low speed adjust presser foot
[061. FO]	The action time of the full initial output of the presser foot and the back seam	0~990	50	Back tack start action, the full force of the action time pressure feet
[062. FC]	Periodic signal of presser foot and back seam action	OFF/ON	OFF	Back seam action, to periodically save electricity output, to avoid the pressure feet perm
[063.FD]	Delay motor start, protect presser foot drop time	0/1/2	0	Delay start time when stepping down, match the confirmation of down the presser foot
[064.HHC]	Half behind step cancel lifting presser foot function, direct quick trimming function	0~180	100	ON: Half behind step, no pressure on presser feet, and direct quick cut line action OFF: The half behind step, with pressure on the presser feet, do not cut the line (whole behind step to cut line)
[065.SFM]	Safety switch signal type	0~360	200	0: The safety switch enters the force signal, must maintain the normal opening condition 1: The safety switch enters the force signal, must maintain the normal closed state 2: Turn off the safety switch
[067.T1]	Mechanical angle of the scratch line starting (from the mechanical angle of the upper needle position to 0)	0~180	100	A number of mechanical angles starting from the upper needle to absorb the magnet, if set at 10, that is, release electromagnet at 10 degrees after the position of the upper needle
[068.T2]	Grasping line electromagnet suction action continuous angle (mechanical angle)	0~360	200	The angle(mechanical angle)of the absorbing action experience of the electromagnet of grasping line, from the. T1 begins to rotate(T1+ T2) Angle of release, where [067. t1]+[068. T2] and values that must be bigger than [076.DRU]

[069. M]	Midway Stop Speed Setting	150~800	600	No cutting halfway, stop and speed setting
[070. L2]	Reverse Lift needle angle setting after trimming sewing stop	0~280	0	0: No need to reverse the needle 1-280 Reverse Lift needle angle, 4 means 1 degrees
[071.W1]	Delay time before sweep line action	0~980	15	Locate the position and go to the dial/sweep line, Time interval between sequential
[072.W2]	Sweep line Action Time	0~990	40	Set to 1, dial/sweep the timing of the action
[073.WF]	Delay time before presser foot action	0~990	50	The spacing time before the timing of the presser foot after the dial/sweep is done.
[074.FHT]	Automatic foot rise and maintenance time when sewing stops	1~200	10	The maintenance time of the rising of the automatic presser foot
[075.UEG]	Position adjustment when top stop needle stops	0~250	0	Adjust the position of the position stop at the fixed point (the center value is 40), When the number decreases, the needle is stopped in advance, and the value increases when the pin is delayed.
[076.DRU]	Reverse rotation from the lower needle position, Reach the angle of the upper needle position	46~360	180	[048. SYM]Set to 3, from the bottom of the needle, to achieve the reverse angle of the needle position to set the virtual position of the next stitch
[077.ANU]	Automatically find the position after power up	OFF/ON	ON	On: After the power is turned on, automatically locates the position signal and stops OFF: No effect
[078.URU]	Angle of reverse rotation to 0 from top needle	1~360	5	[048. SYM]Set 3, from 0 points to achieve the reverse angle of the upper needle position to set the virtual bottom needle
[079.ERR]	Error code for last failure	0~990	0	0 - No failure occurred

Appendix II system fault Alarm code and fault solution

The control system of high speed sewing machine has automatic alarming function. In the event of a failure, the controller emits a "drop" beep and a corresponding error code is displayed on the operator panel. The controller automatically starts the protection program and stops all sewing functions to avoid accidents.

The meaning of the fault code and the possible problems and solutions are as follows:

Error code	Code meaning	Possible problems	solution	
S E R I O U S E R R O R	ERR-00	Self-test error of transmission signal	<ol style="list-style-type: none"> 1. Pedal speed control circuit problems or self-test found that pedal has been in the front, after the state, can not return to neutral position; 2. DC bus voltage is low; 3. Drive module fault signal is abnormal 	<ol style="list-style-type: none"> 1. Release the pedals and return to the neutral position. 2. Check if the signal cable on the pedal is connected.
	ERR-01	Abnormal signal Feedback from machine head	<ol style="list-style-type: none"> 1. Synchronizer error, unable to detect top needle position 2. Sensor Magnet Shedding 	
	PWROFF	Power offer	<ol style="list-style-type: none"> 1. 30V fuse failure; 2. System Power off 	Power off, check each fuse, and power up again.
	ERR-03	Machine head is running abnormally.	<ol style="list-style-type: none"> 1. Synchronizer error, unable to detect bottom needle position 2. Sensor Magnet Shedding 	
	ERR-04	Over-current, overpressure, Over-temperature, undervoltage	<ol style="list-style-type: none"> 1. Motor Power Drive module failure; 2. Instantaneous interference 	
	ERR-05	DC Bus voltage Overpressure	<ol style="list-style-type: none"> 1. The brake resistance is bad or the brake fuse is burnt; 2. Instantaneous interference 	Power down the system and check
	ERR-06	Electromagnet power supply Overcurrent	<ol style="list-style-type: none"> 1. The electromagnetic iron load is too large or short circuit; 2. Drive circuit failure; 3. Instantaneous interference 	Power down the system and check
ERR-07	Plugging	<ol style="list-style-type: none"> 1. Mechanically stuck; 2. problem with the trimming mechanism; 3. Encoder signal is abnormal; 4. Motor Output Hall signal is abnormal 	Turn off system power Check to see if mechanical characteristic of sewing machine is normal	

G E N E R A L W A R N I N G	9	DC Bus Low voltage	1. The AC voltage of the transmission is too low; 2. Internal failure	Check the power supply voltage
	A	Positioning stop errors	1. MPD and SPD parameter setting is not correct; 2. overload 3. Encoder signal is abnormal; 4. Synchronizer signal instability; 5. Motor failure, insufficient driving force	Power off, inspect the front and the motor is normal
	B	Exceeding the specified maximum speed	1. Exceeding the maximum speed in the same direction; 2. Exceeding the opposite direction 300r/min; 3. Encoder signal is abnormal; 4. The motor output HALL signal is abnormal; 5. Motor failure (e.g. demagnetization).	1. Check the drive line between the control box and the motor u/v/w connected well or not 2. Check the system grounded reliably or not
	C	Synchronizer self-test Error	Synchronizer is not plugged in	1. Power off, plug in the Synchronizer, then power up. 2. Replace Synchronizer
	D	EEPROM read/write Data error	Problem with the EEPROM storing the parameters	Replace EEPROM
	E	Set parameter Error in EEPROM	Incorrect setting parameter in EEPROM	Power up reboot.
	F	Error in output signal of motor encoder	If “F” , continuous alarm , indicating the problem of the motor built-in encoder	Check whether the motor output signal line is disconnected or bad contact

After the failure, first shut down the system power, check the control system grounding is good. 30 Seconds later to reboot the power supply and observation system is working properly. If the failure does not clear, please try a few more times, still not clear, please contact the Supplier.

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