

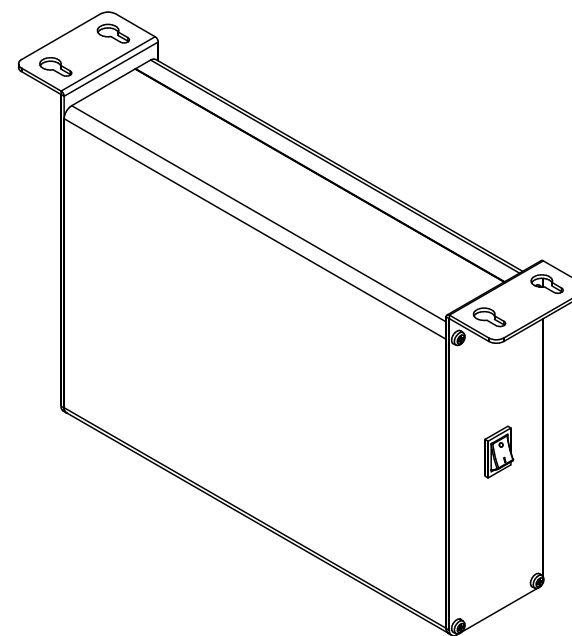
*C series*

**Industrial sewing machine servo control box**

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## **Instructions**



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

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## I 、 Announcement

C series industrial sewing machine servo control box is special for industrial sewing machine system ,please using it with professional guide to prevent any accident .

C series followed by “-D” means it is available for the direct drive sewing machine head, read the detail of this manual.

### 1. Work environment

Using range as 220V, +10% A.C.

Keep away from interference source to prevent wrong action happen .

Quote the temperature between 5℃~45℃,relative temperature couldn't out of 80% in the room .

Keep away from flammable and combustibile materials.

### 2. Installation notice

Install the control box follow the instruction in right way.

Make sure the power off and pull out plug before installation.

Keep away from any active body when binding wire.

Make sure the machine head 、 motor and control box grounding reliably.

### 3. Safety notice

Make sure the power off before you repair or maintenance .

Make sure the power off before you open the machine or change the needle、 cop latch or threading .

Please keep the motor with low-speed running because there' s high pressure inside ,make sure motor running in right direction and control box with normal function.

During the sewing period ,don' t touch hand wheel 、 needle and take -up -lever.

For the active body, make sure the protective equipment is available, and sure there is no anything blocking outside.

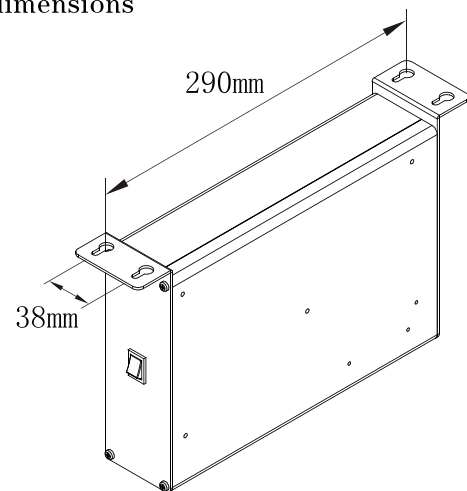
When there' s any liquid or other corrosive substance get to control box or motor , stop working and power off immediately, then deal with it by professional .

Don' t insert or extract any connector with power on .

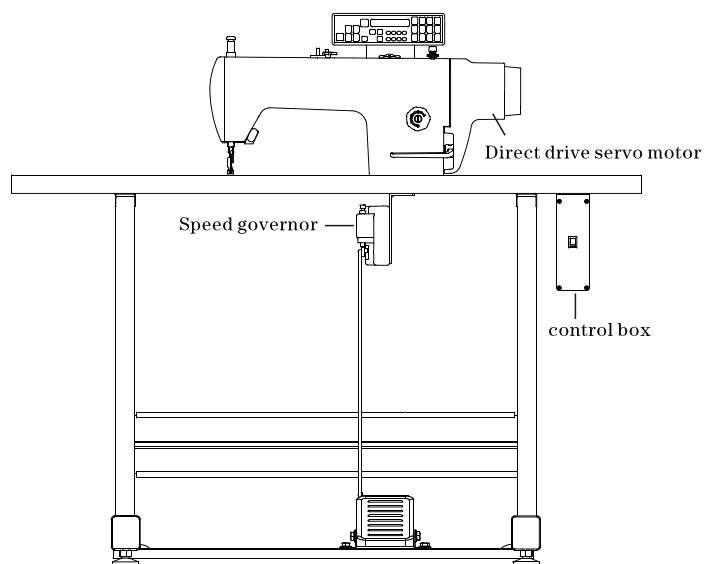
Unlocking device: holding connector to insert and extract .Don' t shake connector or cable .

## II 、 Installation and adjustment

### 1. Control box dimensions

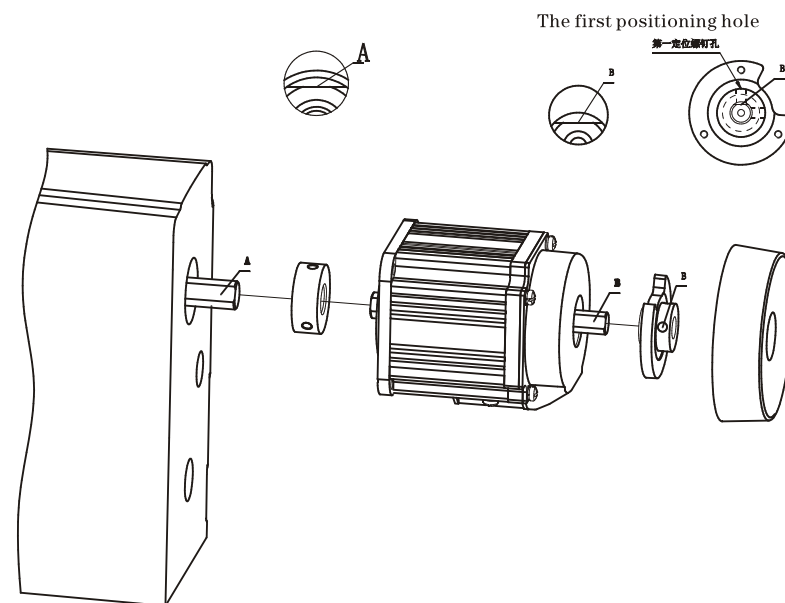


### 2. Machine installation diagram



### 3. Installation of direct drive motor and hand wheel

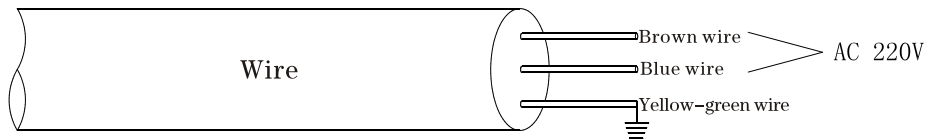
Motor is mounted to the motor shaft mounted hand "flat" point machine upper axis positioning "flat" position in a straight line installation. Figure: A to align A to install the handwheel positioning block to the first positioning holes on the motor "flat" Installation



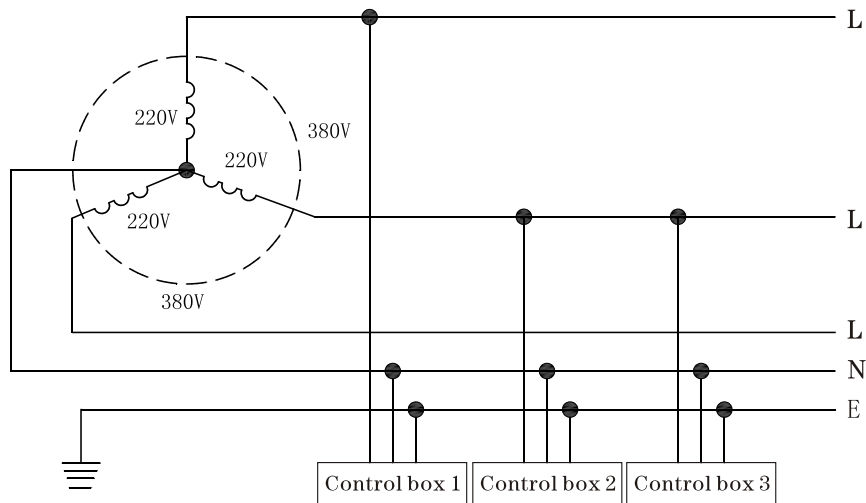
### III 、 Power cord connection

#### 1. Single-phase 220V power connection

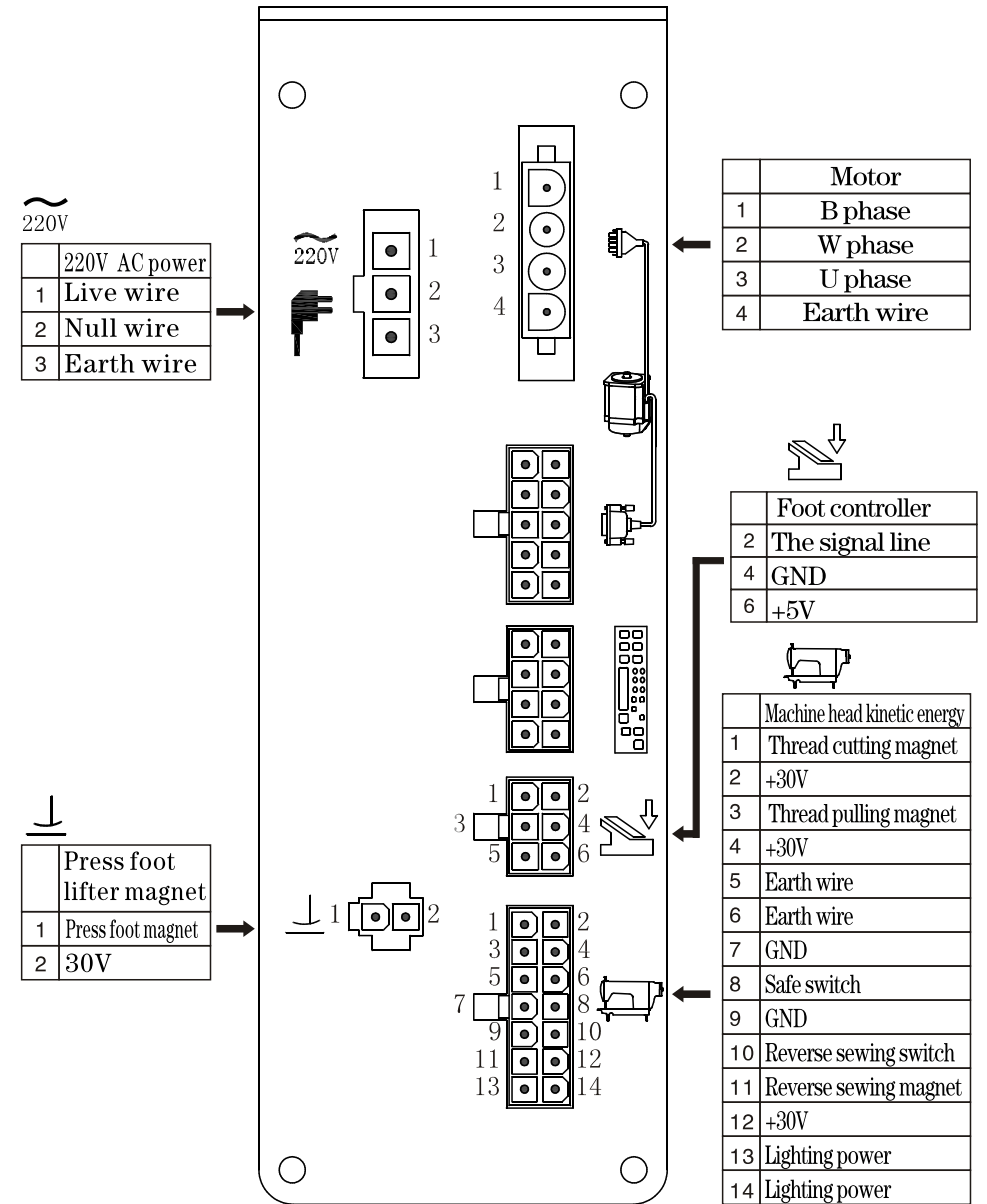
Yellow-green wire is the ground wire, must ensure reliable grounding



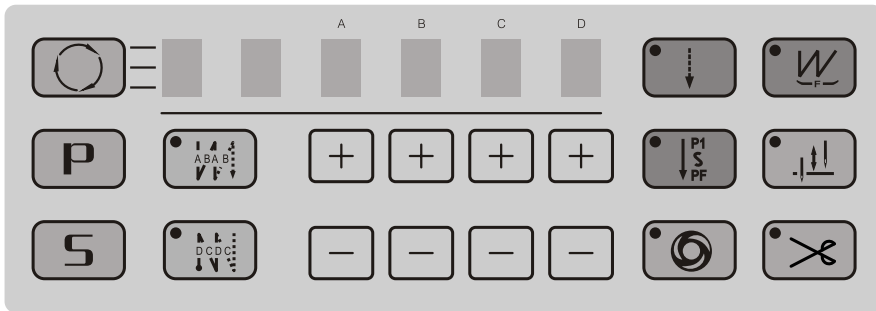
#### 2. 380V three-phase four-wire power connection



### IV 、 Terminal Block Function Chart



## V、C-68 operation panel diagram ( C-68 special )



### 1. Speed setting

#### How to set speed

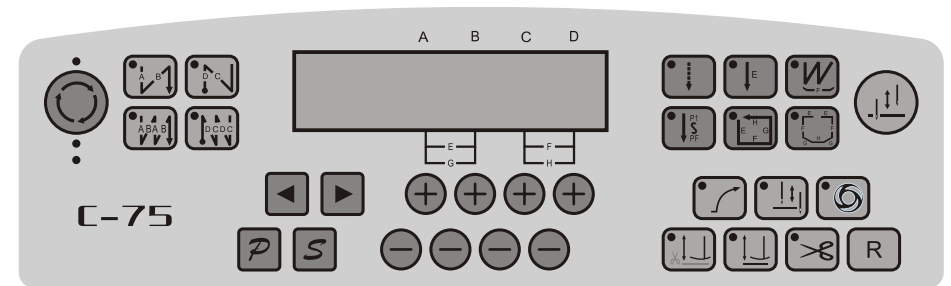
Press and hold the P key for 2-3 seconds, Show 001 .. H then click the S key to display H. 3500, "H" is the parameter name. "3500" as the parameter contents, which means that the current maximum speed is set to 3500r/min. With the + - keys to change the current speed, press and hold the S key, then press the P key for 2-3 seconds to exit, the speed setting is completed.

### 2. Start sewing / stop sewing

Click the button, LED lights and flashes to indicate the start sewing one time, press the button secondly, LED lights on without blinking, start sewing the second, LED lights do not turn on lights indicate the starting stitch functions off.

Click the button, LED light flashes to indicate termination seam one time, press two times button, LED lights on without blinking, the termination of the second seam, LED lights do not light indicates Close stop sewing functions.

## VI、C-75 type operation panel diagram (C-75 special)



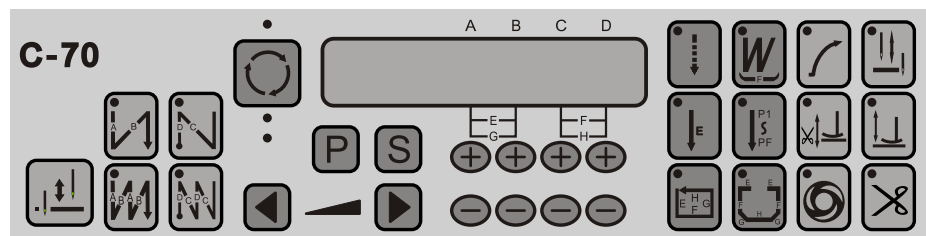
### 1. The number of processing pieces display

In general sewing screen, press and hold the S key, then display (release displays general sewing interface), not loose in the case of the S key, and then press the R key, which displays "PN.0" means that the piece from 0.

### 2. Electronic thread Terminal hidden switch

Button the R key off, click again on

## VII、C-70 type operation panel diagram









### 1. Sewing mode selection

Function	Keys	Sewing Action Description
Start / End reverse sewing selection		Start reverse sewing two times
		Start reverse sewing one time
		End reverse sewing two times
		End reverse sewing one time
Free sewing		1. Pedal front part stepping is automatically executed sewing. When the pedal is in original position, stop sewing. 2. When the pedal back part stepping, the auto-complete trimming / wiping thread movements.
Continue reverse sewing		1. Step forward the pedal then automatically executed reverse sewing action, round-trips from D settings. 2. Reverse sewing triggered automatically perform this function until the completion of the trimming, halfway not sewn, unless backward step pedal released the action.

Fixed stitch	 或  或 	1. When the pedal before riding, the implementation of E, F or G, H segment Constant-fixed stitch sewing number. 2. When foot pedal to the neutral position, immediately stop sewing position before riding again, then complete the E, F or G, H segment unfinished needles. 3. When parameter [010.ACD] is set to ON, the completion of the last paragraph of the fixed stitch reverse sewing automatically after the completion or termination of the trimming, wiping threads and other activities. 4. Way stop or in the sewing operation, if the pedal after depressing, it is forced to terminate, and automatically complete trimming, wiping threads and other activities.
Multi-segment sewing		In the parameter [032.BAR] is set to 0, this button lights is eight segment sewing state; In the parameter [032.BAR] is set to 1, this key light is multi-segment seam status, Maximum set to fifteen segments seam
Stitching number selection		Press to select the toggle upper / middle / lower segment number of stitches settings and window displays. Said upper segment A、B、C、D Said middle segment E、F Said lower segment G、H A, B, C, D, etc. Sec, stitch setting selectable from 0-9. E, F, G, H other four SEC, the stitch setting range from 0-99.
Needle Up/patch stitch sewing		1. In Free sewing: one touch of the key will raise the needle to up position or will correct half stitch forward. 2. In fix-Stitch Sewing: ( Except continue reverse sewing faction ) 1 ) If sewing stops intermediately in one section, one touch of the key will raise the needle ; 2 ) If it stops at the end of section, one touch of key will forward one stitch .
Pieces number display		General sewing screen press and hold the "S" key, which displays "PN.022", loosen general sewing screen is displayed.

## 2. Function setting

Sewing feature set basic options: Auto, trimming, needle position, slow start, half way presser foot, presser foot and trimming.








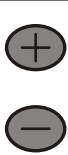



Function	Keys	Sewing Action Description
Trigger automatic (AUTO)		<p>1. In the free sewing process, press this key beep sound, no realization of functions, LED is not lit.</p> <p>2. In the fixed stitch sewing process, press this button:</p> <p>1) When the pedal before riding to auto-automatically execute E, F segment or G, H segment set stitch number, paragraph number of stitches to complete stop.</p> <p>2) One by one before stepping on the pedal, which automatically execute the next segment until the set number of stitches done automatically trimming and sweeping threads action.</p>
Trimming switch		Set whether to use the trimming function. LED lights indicate the trimming function, LED is not lit means closing trimming function.
Needle position setting		Sewing stop and needle position setting keys, function with [003.NUD], upper needle / down needle. LED light indicates that the upper position, LED is not lit indicates the down position.
Slow start setting key		Slow start setting key, LED light indicates on, not lit indicates off.
Stopping halfway presser foot lifter setting key		Sewn on the way stopped if automatic lift presser foot, LED light indicates open, light off indicates close.
Setting key for Presser foot lift after thread trimming		After trimming whether automatic presser foot lift, LED light that automatically open presser foot lift, off to disable automatic presser foot lift.

## VIII、Parameter settings panel buttons for use


The servo control system has a number of parameters can be modified, arranged in a certain order. The specific parameters of the project content, Chinese name, scope, content and setting the initial value numerical explanation see appendix "system function parameter list." Function parameters are divided into Zone A user parameters (including 1-45 numbers) and system parameters B area (including 46-79 numbers), all parameter settings are implemented on the operation panel.

### 1. Keys function


The system enters the "parameter setting interface", the button on the control panel redefines the meaning of the original differ, specifically defined as follows:

Key	Description	Remark
	Parameter number plus one	Press and hold on the parameter number has been increasing continuously.
	Parameter number minus one	Press and hold on the parameter number has been decreasing continuously.
	Parameter number plus (or minus) one	Hold on  and button  again then add or minus 1.
	Contains all the parameters to view or save	In the selected parameter number Press to view or modify the parameter content; modify the parameter value Press to exit and save the parameters.
	The function of Enter or exit parameter editing	In general sewing Interface press this key 2-3 seconds into parameter editing; in the parameter edit mode press this button for 2-3 seconds to exit parameter edit mode to normal sewing screen.
	Plus minus keys to modify the contents of the parameter value	A corresponding subtraction modification multiples of 1000; B corresponding subtraction modification multiples of 100; C corresponding subtraction modification multiples of 10; D corresponding subtraction modification multiples of 1;
	Speed key	 Reduce speed  Increase speed







## IX、 Instructions for setting up a variety of seam


1.Free sewing model setting: 

1) How to setting the free mode:


After turning the standby mode, press the light  button LED lights, is free sewing state, then stepped forward pedal gently run automatically when free sewing. When the pedal in neutral state immediately stops sewing, riding pedal backward is done automatically trimming and sweeping threads movements.

2) How to set start and end back tacking (forward and backward reinforcement stitch) the number of stitches

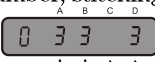
In free or fixed stitch sewing, multi-state button  sewing light is one time start back tacking, Button  light is two times start back tacking, Start back stitches setting, key  switch to the previous segment LED lights, then display  A,B the corresponding figure was starting reverse sewing stitches, C、 D corresponding figure for the number of end reverse sewing stitches, adjust the number of needles by  $\pm$ , The following key figures can be adjusted, the number of end reverse sewing button  lights is a stop-reverse seam, button  light is two times end reverse sewing.

2. Continuous reinforcement reverse sewing settings: 


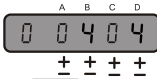

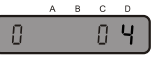
1) How to set continue reverse sewing:


In standby mode button  light is continue reverse sewing state, then stepped forward the pedal is performed automatically reverse sewing action.

2) How to set reverse sewing number and stitch number, parameter [032.BAR] is set to 0 (up to nine times the reverse sewing number, stitching number up to 9-pin)


In reverse sewing mode, the display shows  A、 B the corresponding figure for pin number, C、 D the corresponding figure for the number of consecutive reverse sewing through the following buttons  $\pm$  to adjust the number of stitches and reverse sewing times.

3) How to set reverse sewing number and pin number, parameter [032.BAR] is set to 1 (the highest number of 19 times, up to 99 needles needle)

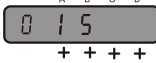
In tacking mode, by switching  to switch to the previous segment LED lights, the display shows  A、 B and C、 D corresponding to the number of stitches, by switching button  to switch to the middle LED lights display shows  C、 D corresponding to the figures for the number of times.

3.Fixed stitch seam settings: 






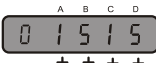
1) How to set fixed stitch seam:


In standby mode button  light is fixed stitch state, this time before stepping foot pedal complete the set number of stitches and automatically trimming and wiping threads.

2) How to set fixed needle stitches:


In the fixed stitch mode, the display shows  A、 B shown in figure fixed needle stitches can be set up for the 99-pin, through A, B corresponds to the following  $\pm$  keys to adjust.

3) How to set the starting and ending of fixed stitch, the number of end reverse sewing stitches pin number and the times.

In the fixed stitch state, need 1 or 2 times start reverse sewing then press the desired button  or , need 1 or 2 times end reverse sewing press the desired button  or , start、 end the number of reverse sewing adjustment, By switching button  to switch to the middle LED lights, then display  A、 B corresponding figure was starting reverse sewing stitches, C、 D corresponding figure for the number of end reverse sewing stitches, can be adjusted by the following  $\pm$  key.


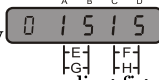

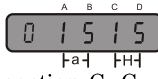
4. Four segment seaming setting: 

1) How to set four segment seaming:

In standby mode , button  lights shall be four seam state where every step forward for some time to complete one segment sewing, the fourth auto-complete trimming, wiping thread movements.



2) How to set each segment Stitch number:


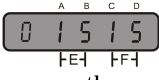

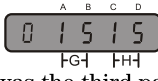
In the four segment seam state, by switching button  to switch to the middle LED lights, then display , A, B corresponding figure for the first paragraph of E stitches, C, D corresponding figure for the second paragraph of section F stitches number, the following ± keys can be adjusted via the corresponding pin numbers, each up to 99 stitches, this time through the switch  to switch to the next segment LED lights, display , A, B corresponds to the number of stitches for the third paragraph of section G, C, D corresponds to the fourth paragraph of section H stitches number, adjust the number of stitches second way same way as the first, start and end back tacking same way.

5. Seven segment seam settings



1) In the standby mode, the button  lights, is the seven segment joints state, then once every front pedals to complete some sewing, sewing seventh paragraph terminates automatically trimming, wiping threads

2) How to set the stitches number of each segment:


In the sever segment joints of the state, by switching button  to switch to the middle LED lights, then display , A, B corresponding figure for the first paragraph (ie, segment E), is the seventh paragraph: C, D corresponding figures for the second (ie, segment F) is the sixth paragraph, the following buttons ± to adjust the stitching number through this key, each up to 99 stitches, by switching  to switch to the next segment LED lights display .

At this point A, B corresponding figure was the third paragraph (ie, segment G) is the fifth paragraph, C, D corresponding figure for the fourth paragraph (ie H segment), adjust the number of stitches same E, F segment, starting, end back tacking sewing set same as fourth segment, eight and seven segment seam stitch setting adjustment can be adjusted the same way.

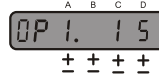
6. Multi-segments stitching settings:



1) How to enter multi segments stitching.



In standby mode, enter the user parameter 032, BAR, press S to enter, change parameter 0 to 1 or 2 confirm exit. Modified to be off 10 seconds then restart to take effect, then the button  light is multi-seam status.

2) How to set multi-segments stitching number.

In the multi-segment state, the display shows . A point corresponding figure for the segment numbers. By the below ± keys to adjust the number of segments, from a total of 15 segments P1-PF, B, C, D below the corresponding figure for the number of stitches can be adjusted by the ± key, stitches number maximum adjustable 200-pin. (Hint: do not need segments their stitches number should be adjusted to 0).

7. Speed setting:


1) How to set speed:

Press and hold the key  to reduce the speed, hold the key  to improve the speed of 50 revolutions per press.

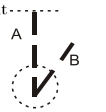
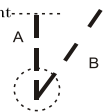
## 8. Adjustment reinforcement stitches

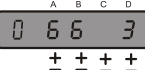
In the lockstitch models, the front and rear reinforcement stitches flush synchronization compensation need to be adjusted, before reinforcement stitch, after reinforcement, continuous reinforcement stitch, their compensation method is basically the same, now flush with a continuous reinforcement stitch sync compensation adjustment examples will be described.

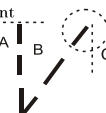
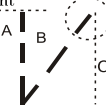
Front reinforcement stitch compensation parameters 018BT1 with 019BT2 compensation value, continuous press P key 2-3 seconds to enter the user parameter to identify 018BT1 with 019BT2, then the reinforcement stitches to repair, after sewing reinforcement parameters 025BT3 and 026BT4, continuous reinforcement stitch parameters 035BT5 with 036BT6, see the user parameter list.

Parameters 1): In the  stitches setting stitches 6 pin, the times number is set to 2,

for example: 

Phenomenon	Adjustment
	(A segment stitches more than the design value of the stitches number, causing the B section is unable to return to the starting point when sewing) B short paragraph please adjust [035.BT5] property values from the 1-31 to make appropriate adjustments in the original figures, adjusted figures should be increased.
	(B segment stitches value more than the setting, resulting in more than a starting point) B segment longer, please adjust [035.BT5] property values from the 1-31 to make appropriate adjustments in the original figures, should reduce the number adjustment.

Parameter 2): 2 times above settings adjusted after setting increases 1, is set to 3, for example: 

Phenomenon	Adjustment
	(C segment stitch number to be less than the set number of stitches, resulting in paragraph C of section B is unable to return to the starting point of a short seam) C segment short, adjust [036.BT6] property values from the 1-31 to make appropriate adjustments in the original, the figures on the adjusted figures should be increased.
	(C segment stitch number to be more than the setting, resulting in segment C unable to return to the starting point segment B is long seam out) C segment longer, please adjust [036.BT6] content from the 1-31 to make appropriate adjustments in the original, the figures should be reduced figures adjusted.

After adjusting these parameters, 1/8 needle unit:

The [018.BT1] parameter adjustment and [035.BT5] same parameters;

The [019.BT2] parameter adjustment and [036.BT6] same parameters;

The [025.BT3] parameter adjustment and [036.BT6] same parameters;

The [026.BT4] parameter adjustment and [035.BT5] same parameters;

## 9. How to enter the user parameters and system parameters:

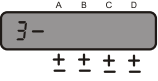
Standby status backward pedal after trimming, hold down the P key for 2-3 seconds, you can enter the user parameter area A, the 001 ~ 045 parameters can be modified. Press S parameter modifications confirm to save and then press the P key for 2-3 seconds to exit.

In the off state, press and hold on the P key then system power on, the display shows 046DIR, you can enter the system parameter B area, capable of 046 ~ 079 parameters can be modified, the modified parameter save and then confirm by pressing S, button P for 2-3 seconds to exit. Enter the system parameter B zone A, the user parameters can be modified.

Note: Entering parameter area to find the number of the parameter you want to modify and press the S key to enter the parameter to modify the contents of the interface, and then modify the content of the corresponding, press S to confirm the save to take effect.

### 10. How to restore the factory settings:

1) Turned off, press and hold the S key system power on, then the panel displays lasted two digits modify to "08" and then press the S key to confirm, the parameter number consists of 080 add to "096, RS" (Note: 08 0 is not displayed). Press S to enter the 096 number to modify interface parameter contents, the contents of the parameter modify to "5550" and then press the S key, then press P key for 2 ~ 3 seconds to exit.

2) P and S keys while holding down the button, the system is powered on,  the first number 3- kept flashing, indicates a successful restore factory settings, (Note: If you do not a 3- in the flashing, the panel does not support this methods to restore factory settings).

## X 、 New Special Function

### 1. One touch type speed adjustment of reverse sewing: [ 038.PM]

( High-speed reverse sewing thick material made needle and thread break easily )

OFF: One touch type speed in accordance with reverse sewing stitch (006.B) parameter speeds;

ON: One touch type reverse sewing run at high speed does not slow down;

### 2. Quick trimming function adjustment: [064.HHC]

OFF: There is presser foot function, only to full-backward to use trimming function;

ON: Change the presser foot lift function into trimming function;

Note: The machine is equipped with automatic presser foot lift to be set OFF

### 3. After cut thread raise needle to its highest point adjustment: [070.L2]

( When doing thick material presser foot carried up, the needle did not return to the highest point, the needle touched cloth )

0: OFF

1 ~ 280: You can set between generally highest setting 200;

Note: 1. Adjusting trimmer cam must certain settings 0 disable this function;

2. Turn on this function sew again may cause sewing off-thread, please re-adjust the trimmer length of thread.

### 4. Pedal reaction speed adjustment: [034.BRN ], [052.PA ]

[034.BRN ]: Slow response sensitivity adjustment area. Parameters content: 20 to 200 can be set between of it, the smaller value, the faster response, the greater value then slower response.

[052.PA ]: Speed to the highest speed from the start speed adjustments. Parameters content: 50 to 800 can be set, the smaller value, the slower response, the greater value, the faster reaction

### 5. C-75 electronic control panel with the needle lift and electronic thread clamp switch function

Switch directly on the panel, click the R key to open, and then click the R key off.

### 6. Restore factory settings

While holding down the P key and the S key system power on, digital control first figure 3- in the flashing, indicates a successful restore factory settings (Note: No 3- in the flashing, indicating that the operation panel does not support this feature).

## XI 、 Seven segment display font and font actual value comparison table

### 1.Digital Fonts section

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

### 2.English font section

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

Note: Appendix One System function parameter list

1. A user parameter area

Parameters Item Description	Name	RANGE	Initial value	Set Property Value Description
[001. H]	Maximum speed r/min	150~4000	3500	The highest speed setting when sewing with related models
[002.PSL]	Acceleration curve adjustment	1~100	70%	Climb slope of the acceleration controller settings
[003.NUD]	Needle stop position selection	UP/DN	DN	UP ( Upper needle stop position ) /DN ( Below needle stop position )
[004. N]	Start reverse sewing speedr/min	150~2800	1800	Start reverse sewing speed setting
[005. V]	End reverse sewing speed r/min	150~2800	1800	End reverse sewing speed setting
[006. B]	Continue reverse sewing speedr/min	150~2800	1800	Continue reverse sewing speed setting
[007. S]	Slow start sewing speed r/min	150~2800	800	Slow start sewing speed setting
[008.SLS]	Slow start sewing stitch number	0~99 针	2	Slow start sewing stitch number setting
[009. A]	Automatic stitch sewing speed setting r/min	300~4000	3200	AUTO operation panel keys are pressed for speed setting
[010.ACD]	Fixed stitch automatically end reverse sewing (do not patch stitch function settings)	OFF/ON	ON	ON: After performing the last paragraph of the fixed stitch, it will automatically end reverse sewing action. That is, in any sewing mode, the termination can not be sewn back patch stitch functions. OFF: After performing the last paragraph of the fixed stitch, it will not automatically end reverse sewing feature, you must re-do forward or full back riding pedal , before the end reverse sewing can be patch stitch sewing function.
[011.RVM]	One touch type reverse sewing function model selection	JUK/BRO	JUK	One touch type reverse sewing key timing, JUKI style (sewing or stop status all are operate BROTHER style (only in the sewing status operation)

[012.SMS]	Start reverse sewing motion mode selection	A/M	A	A: Touch the pedal lightly, which automatically performs the fixed stitch action M: Affected by the pedal can be arbitrarily stop and start
[013.TYS]	After Start reverse sewing operating mode selection	CON/STP	CON	CON: Start reverse sewing is completed, the next segment features automatic continuous STP: Stops automatically after start reverse sewing segment stitches completion
[018.BT1]	Start reverse sewing compensate for 1	Early action: 1~16 Delay action: 17~31	8	BT1、BT2=0 Invalid BT1、BT2=1~16 Early movement timing (1/8 stitch units) BT1、BT2=17~31 Delay movement timing(1/8 stitch units)
[019.BT2]	Start reverse sewing compensate for 2		5	
[020.SME]	End reverse sewing motion mode selection	A/M	A	A. Touch the pedal lightly, action performed set stitch automatically M. Affected by the pedal can be arbitrarily stop and start
[025.BTS]	M. Affected by the pedal can be arbitrarily stop and start 3	Early action: 1~16 Delay action: 17~31	5	BT3、BT4=0 Invalid BT3、BT4=1~16 Delay movement timing(1/8 stitch units) BT3、BT4=17~31 Delay movement timing(1/8 stitch units)
[026.BT4]	M. Affected by the pedal can be arbitrarily stop and start 4		8	
[028.PN5]	Piece-rate setting	1~100	1	1~100: This parameter sets the number, and trimming according to the number the pieces number increase the value of one, the pieces shows [044.PN ]
[030.BCC]	When end reverse sewing C segment plus one stitch	OFF/ON	OFF	When end reverse sewing C segment plus one stitch automatically ON : Effective OFF: Invalid
[031.SMB]	Continue reverse sewing motion mode selection	A/M	A	A: Touch the pedal lightly , action performed set stitch automatically M: Affected by the pedal can be arbitrarily stop and start

[032.BAR]	Continue reverse sewing settings	0/1/2	0	0: Reverse sewing A、B-D times (up to 9-stitch), is defined as E、F、G、H and H、G、F、E operation, no operation mode P1 ~ PF 1: Reverse sewing AB、CD-F times (up to 99-stitch), both P1 ~ PF mode of operation 2: Reverse sewing A、B-F times with C、D (max 9-pin), both P1 ~ PF mode of operation Note:: This parameter is modified, after power off 10 seconds then restart to take effect
[034.BPN]	Slow zone forward stepping pedal in response sensitivity settings	20~200	80	20: Forward stepping the fastest response 200: Forward stepping the slowest response
[035.BT5]	Continue reverse sewing compensation 5	Early action: 1~16 Delay action: 17~31	8	BT5、BT6=0 Invalid BT5、BT6=1~16 Early movement timing (1/8 stitch units) BT5、BT6=17~31 Delay movement timing(1/8 stitch units)
[036.BT6]	Continue reverse sewing compensation 6		5	
[038. PM]	One touch type reverse sewing to the high-speed setting	ON/OFF	OFF	OFF: According to the manual reverse sewing speed stages [006.B ] deceleration operation ON: One touch type reverse sewing high speed operation stage, will not slow down
[039. PS]	Reverse sewing button patch stitch function	0/1	0	[ 011.RVM ] Vaild at BRO mode: 0: Reverse sewing button does not function as patch stitch 1: Reverse sewing button function as patch stitch
[040.WON]	1. Wiper thread output function 2. Sewing start electronic thread terminal hiding function	0/1/2/3	1	0: OFF 1: Wiper thread action 2 : Lift needles electronic thread terminal hiding action(angle by 067.T1,068.T2 control) 3: Thread wiping action, thread catching action, catch thread function independently electromagnet GPIO13 port(thread terminal hiding start timing , angle by 067.T1,068.T2) Note: This parameter is model dependent

[042.PSM]	Sewn on the way stopped, presser foot output options	OFF/ON	OFF	OFF: Cancel presser foot lift function
[043.FTM]	Finishing thread cutting and stopped , the presser foot output options	OFF/ON	OFF	OFF: Cancel presser foot lift function
[044. PN]	Sewn complete pieces display	0~9999	0	According to [028.PN5] piecework rate parameter settings , display automatically accumulated number
[045.SSS]	Soft start sewing selection	OFF/ON	OFF	OFF: Cancel soft start sewing function

## 2、System parameters B area

Parameters Item Description	Name	Range	Initial value	Set property value description
[046.DIR]	Motor rotation direction setting (Reversible)	CW/CCW	CCW	CCW: Counterclockwise CW: Clockwise
[048.SYM]	Synchronizer Model Set	0~3	3	0: H-Sync is compatible with HOHSING3: S-type synchronizer, only zero position signal, the down needle position, the upper needle needs need [076.DRU], [078.DRU] set needle position angle (with zero position point)
[049.SPD]	The size of the machine pulley	50~200	75	Machine head model setting has been preset head pulley size
[050.MPd]	Motor pulley size	50~150	80	Machine head model setting has been preset head pulley size
[052. PA]	Front part stepping pedal the sewing speed response sensitivity setting	50~800	80	50: With the pedal response speed is the slowest 800: With the pedal fastest response speed can be set according to the operator proficiency
[054. BK]	The motor is stopped, the brake lock function	OFF/ON	OFF	ON: The motor is stopped , the brake lock the machine head OFF: No effect
[055.TOT]	UTD = ON, the motor running total limited time	1~800Hrs	8	Up to 33 days (800 hours)
[056.TM1]	UTD = ON, the motor running time	1~60s	3	In automatic operation test, the working hours of free sewing
[057.TM2]	UTD = ON, the motor stop time	1~60s	3	When testing the automatic operation, each interval time

[058.UTD]	Automatic operation test function	OFF/ON	OFF	This parameter is set to ON, the automatic operation start testing, according to the sewing needle selection box set mode
[059. T]	Trimming, stopping speed setting r/min	120~400	250	Stopping trimming speed adjustment, the speed is too low may lead to normal trimming speed is too high may lead to uneven positioning control
[060. L]	Low speed value r/min	120~400	250	Low speed value adjustment
[061. FO]	Presser foot and reverse sewing in full operation time of the initial output ms	0~990	250	Presser foot, reverse sewing start operation, the operating time of the full output
[062. FC]	Presser foot, reverse sewing movement cycle signal %	10~90	25	Presser foot, reverse sewing action to periodic power output, avoid hot presser foot
[063. FD]	Delayed motor starting, protection the presser foot down release time	0~990	50	Depress the start time delay to tie down the confirmation of the presser foot
[064.HHC]	Half backward the pedal is cancel function, directly and quickly trimming	OFF/ON	ON	ON: Half backward step no output of presser foot and thread trimming directly and quickly OFF: Half backward step, there is presser foot efforts, not trimming (full-backward step then trimming)
[065.SFM]	Safety switch signal form	NO/NC/LK	NO	NO: Safety switch into force signal, normally open state must be maintained NC: Safety switch into force signal must remain normally closed LK: Turn off safety switch
[067. T1]	Catch thread starting mechanical angle (from the upper position to the mechanical 0 angle)	0~180	100	From the upper needle position of some mechanical angle to pull catch thread magnet, if you set 10, that means from upper needle position on the needle 10 degrees then release the electromagnet
[068. T2]	Catch thread magnet pull action angle (mechanical angle)	0~360	200	Thread catching magnet pulling angle movement (mechanical angle), from T1 begins to turn to (T1+T2) release point, which [067.T1] + [068.T2] value must be greater than [076.DRU] values

[069. M]	Stopping speed setting in midway	150~800	600	Stopping speed setting in midway without trimming action
[070. L2]	After trimming and stopping the needle lifting reverse angle settings	0~280	0	0: No reverse needle lifting angle 1-280 reverse-angle of the needle lifting, and 4 indicates a degree
[071. W1]	Before wiper thread action delay timing ms	0~980	15	Find upper position locate the pull / wiper thread, timing interval time
[072. W2]	Wiper thread action timing ms	0~990	40	[040.WON] When set to 1, dial /wipe timing action time
[073. WF]	Delay time before presser foot action ms	0~990	50	The time sequence of the presser foot to the action after dial / wipe finish action
[074.FHT]	Sewing stop presser foot lift automatically maintenance time s	1~200	30	Maintenance time for automatic presser foot lift
[075.UEG]	Needle upper stop position adjustment in stop situation	0~250	0	Fine-tuning needle stops positioned on the angular position (center value is 40); numerical reduction will stop the needle earlier, the value increases will be delayed needle stopping
[076.DRU]	Counting from the down needle position reverse rotation, the angle reaches the upper needle position	1~360	165	[048.SYM] is set to 3, by the needle down place, counting up the reverse angle on the needle position to set the virtual needle down position
[077.ANU]	Look for the upper needle position when power on automatically	OFF/ON	ON	ON: After the power is turned on, automatically find the upper needle positioning signal to stop OFF: No effect
[078.URU]	Counting on the upper needle position by the reverse rotation angle reaches zero	1~360	5	[048.SYM] is set to 3, counting up from zero the reverse angle on the upper needle position to set the virtual needle down position
[079.ERR]	Last fault error code	0~999	0	0—No fault occurred

## Appendix II System failure alarm code and troubleshooting

C series high-speed sewing machine control system has automatic alarm function. The event of failure, the controller will issue a "bit" beep while on the operation panel will display the corresponding error code. The controller automatically starts saver, stop all sewing function, to avoid accidents.

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

Fault code	Code description	Possible problems	Solutions	
Fatal Error	ERR—00	Input signal self-test error	<ol style="list-style-type: none"> <li>1. Foot pedal speed control circuit problem or pedal power has been in self-test the pedal is in the forward step position riding ,backward step position ,can not return to the neutral position ;</li> <li>2. DC bus voltage is low ;</li> <li>3. Driver module fault signal is not normal</li> </ol>	<ol style="list-style-type: none"> <li>1. Release the foot pedal back to the neutral position</li> <li>2. Check the pedal signal cables are connected well</li> </ol>
	ERR—01	Machine body feedback signal is not normal	<ol style="list-style-type: none"> <li>1. Synchronizer is not normal , the needle upper position can not be detected</li> <li>2. Sensor magnet off</li> </ol>	
	PWROFF	Power off	<ol style="list-style-type: none"> <li>1. 30W fuse problems</li> <li>2. Systems no power</li> </ol>	Power off, check all fuses, re-power
	ERR—03	The machine head is not running properly	<ol style="list-style-type: none"> <li>1.Synchronizer is not normal, can not detected the needle down position</li> <li>2. Sensor magnet off</li> </ol>	
	ERR—04	Overcurrent, overvoltage, overtemperature, undervoltage	<ol style="list-style-type: none"> <li>1.Motor power drive module fault</li> <li>2.Momentary interference</li> </ol>	
	ERR—05	DC bus power overvoltage	<ol style="list-style-type: none"> <li>1. Braking resistor or braking fuse broken</li> <li>2. Momentary interference</li> </ol>	Power off the system checks
	ERR—06	Electromagnet power supply overcurrent	<ol style="list-style-type: none"> <li>1. Electromagnet overload or short-circuit</li> <li>2. Drive circuit faults</li> <li>3. Momentary interference</li> </ol>	Power off the system checks

	ERR—07	Motor stall	<ol style="list-style-type: none"> <li>1. Mechanical jam</li> <li>2. Trimming assembly have a problem</li> <li>3. The encoder signal is not normal</li> <li>4. Motor output HALL signal is not normal</li> </ol>	Power off the system checks whether the normal mechanical properties testing machine
General warning	9	DC bus voltage is too low	<ol style="list-style-type: none"> <li>1. AC input voltage is too low</li> <li>2. There is a fault inside</li> </ol>	Check the power voltage
	A	Stopping positioning error	<ol style="list-style-type: none"> <li>1. MPD, SPD parameter setting error</li> <li>2. Overload</li> <li>3. The encoder signal is not normal</li> <li>4. Synchronizer signal instability</li> <li>5. Motor problems, output not enough</li> </ol>	power off , check machine head and motor
	B	Exceed the maximum speed	<ol style="list-style-type: none"> <li>1. Exceed the maximum speed on same direction</li> <li>2. Over the opposite direction 300r/min</li> <li>3. The encoder signal is not normal</li> <li>4. Motor output HALL signal is not normal</li> <li>5. Motor failure (such as demagnetization)</li> </ol>	<ol style="list-style-type: none"> <li>1. Between the control box and the motor drive line U / V / W connections are good or not</li> <li>2. Whether the system has been reliably grounded</li> </ol>
	C	Synchronizer self-test error	Synchronization is not plugged in	<ol style="list-style-type: none"> <li>1. Power off, plug in the synchronizer, and then plug in power</li> <li>2. Replace the synchronizer</li> </ol>
	D	EEPROM read / write data error	EEPROM parameter storage problems	Replace the EEPROM
	E	Set the parameters in EEPROM error	Parameters in EEPROM error	Power on and restart
	F	Motor encoder output signal error	If the "F" continuous alarm indicates that the motor built-in encoder problem.	Check the motor output signal line is disconnected or wrong

After the accident, the first power off the system, check the control system is grounded good . 30 seconds later restart power on observation system is working properly or not. If the fault does not clear, please try again, still not clear, please contact the supplier.