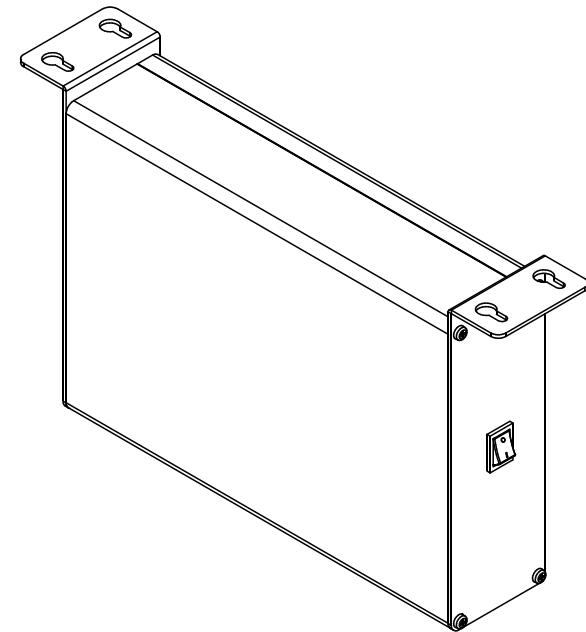


**591 High speed Single
Needle Roller Feed Sewing MACHINE**
Industrial sewing machine servo control box

Instructions



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

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I 、 Announcement

591 industrial sewing machine servo control box is special for industrial sewing machine system ,please using it with professional guide to prevent any accident .Read the manual carefully for details.

1. Work environment

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

Keep away from interference source to prevent wrong action .

Keep the machine at the temperature between 5 °C ~45 °C ,relative temperature couldn' t be over 80% in the room .

Keep away from flammable and combustibile materials.

2. Installation notice

Install the control box follow the instruction 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.

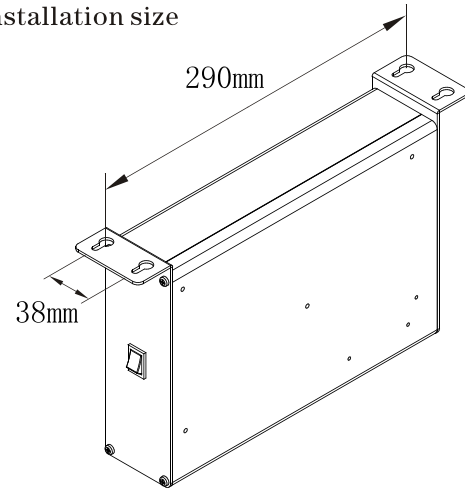
When there' s any liquid or other corrosive substance get to control box or motor , stop working and power off immediately, then deal with it by professional .

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

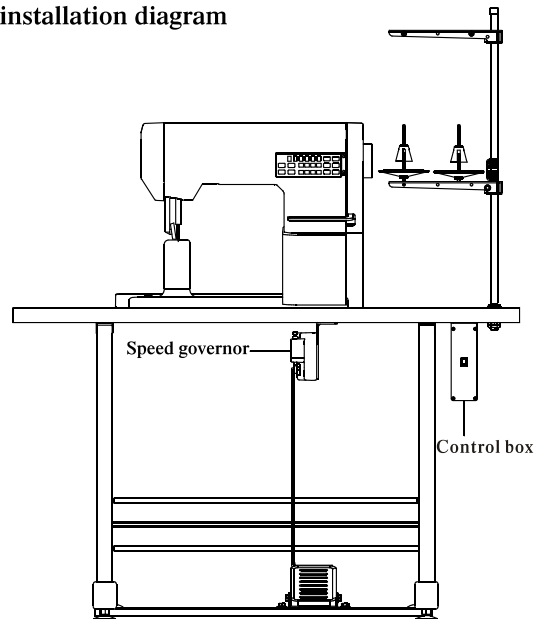
Unlocking device: holding connector to insert and extract .Don' t shake connector or cable

II、Installation and adjustment

1. control box installation size



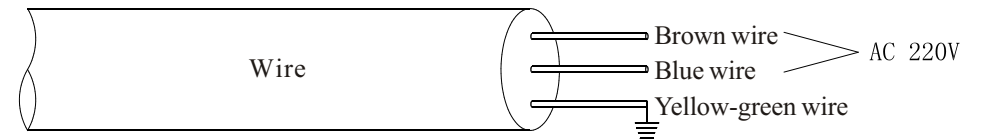
2. Machine installation diagram



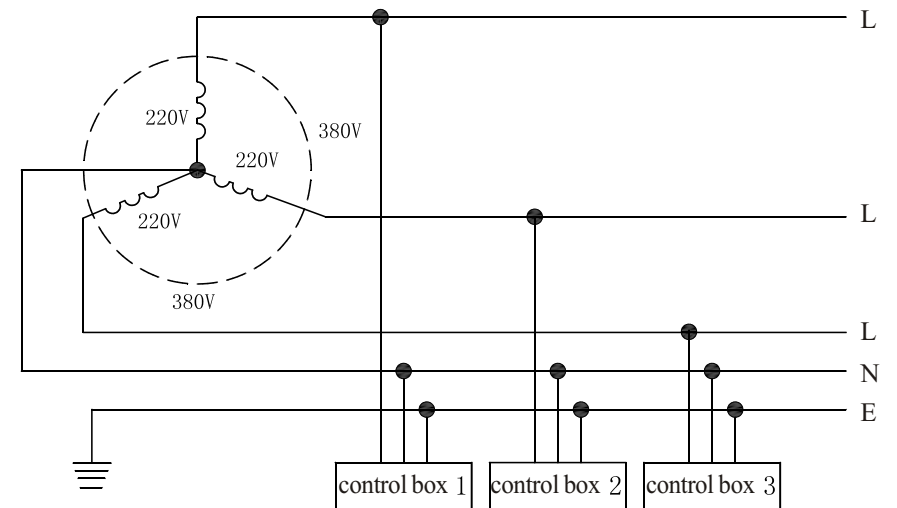
III、Power cord connection

1. Single-phase 220V power connection

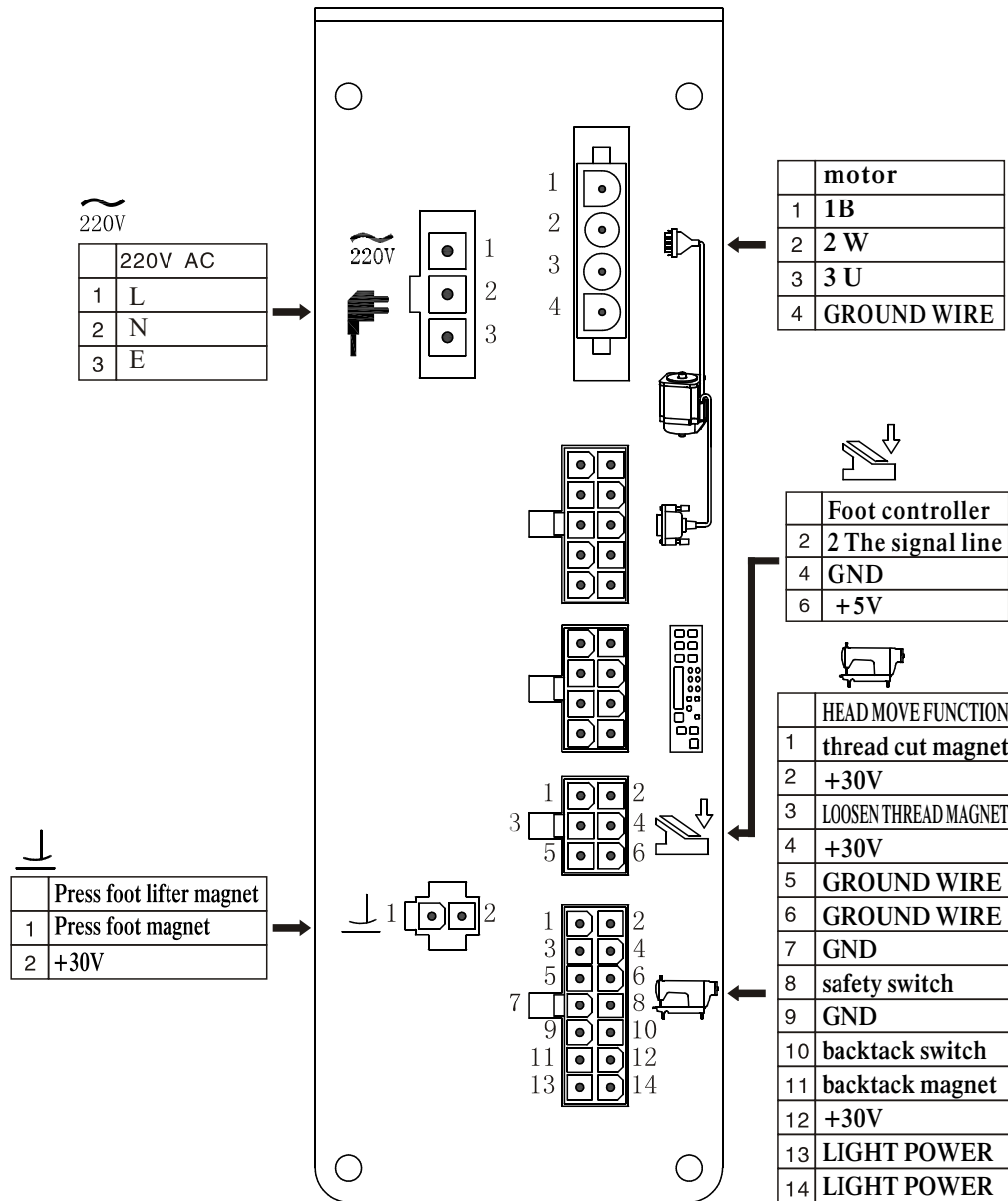
Yellow-green wire is the ground wire, must ensure reliable grounding



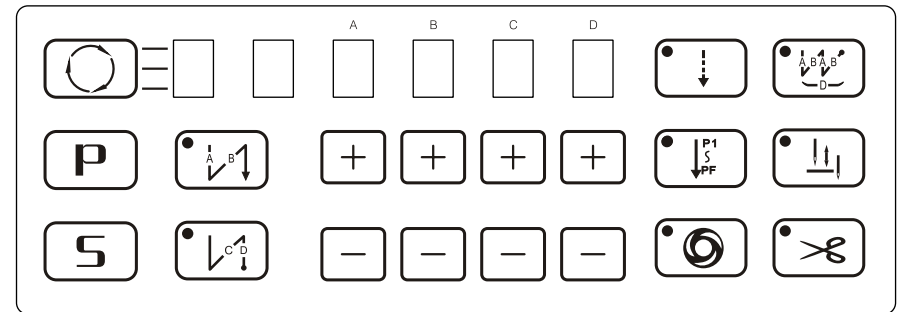
2. 380V three-phase four-wire power connection



IV、Terminal Block Function Chart






V、 operation panel diagram






1. Sewing model selection

Function	Keys	Sewing Action Description
Start / End reverse sewing selection		Start reverse sewing one time
		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 back ward step pedal released the action.

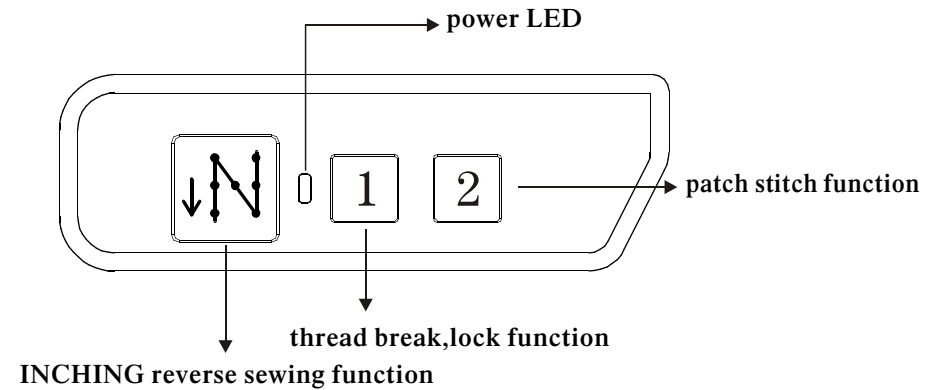
Multi-segment sewing		In the parameter [032.BAR] is set to 0, this button lights is eight segment sewing state In the parameter [032.BAR] is set to 1, this key light is multi-segment seam status Maximum set to fifteen segments seam
Stitching number selection		Press to select the toggle upper / middle / 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.
Peaces 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, halfway presser foot, presser foot and trimming.

Function	Keys	Sewing Action Description
Trigger automatic (AUTO)		1. In the free sewing process, press this key beep sound, no realization of functions, LED is not lit. 2. In the fixed stitch sewing process, press this button: 1) When the pedal before riding to automatically execute P1-PF segment set stitch number, paragraph number of stitches to complete stop. 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.
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.

VI、 HEAD KEY DIAGRAM







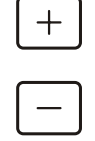
Keys	Function	Sewing Action Description
	INCHING reverse sewing function	At any mode, press this key will start reverse sewing.
	thread break, lock function	At any mode, once thread break, press this key, the needle will stop at upper needle position, machine will be locked, all function don't work, operation panel show "M STOP" flashing, after threading, press the key again will restore sewing mode.
	patch stitch function	At any mode, once thread break, press this key, the needle will stop at upper needle position, machine will be locked, all function don't work, operation panel show "M STOP" flashing, after threading, press the key again will restore sewing mode.

VII、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 Rem	ark
	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.
	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;



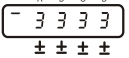

VIII、Instructions for setting up a variety of seam

1.Free sewing model setting: 


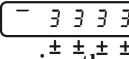

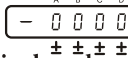

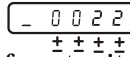
1)How to setting the free mode:

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-segment state.press button  sewing light isstart 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 one stop-reverse seam.

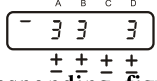
3) switch key function setting

In free sewing,press key, press  upper LED get light,the display show  the number of stitch of start reverse sewing and end reverse sewing.then press again  the middle LED get light,the display show  the speed of motor,press again  the down LED get light,the display show  the total number of stitch from the start of motor to end of motor.it shows motor works 22 stitches.


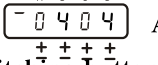

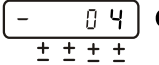
2. Continuous reinforcement reverse sewing settings:

1) How to set continue reverse sewing: 

In standby mode press  light on means continous reverse sewing state, then stepped forward the pedal is performed automatically reverse sewing action.

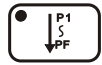
In reverse sewing mode, the display shows  A、 B the corresponding figure for pin number, D the corresponding figure for the number of consecutive reverse sewing through the following buttons \pm to adjust the number of stitches and reverse sewing times.

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)

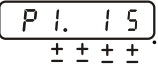
In tacking mode, by switching  to switch to the previous segment LED lights, the display shows  A 、 B and C、 D corresponding to the number of stitches, by switching button  to switch to the middle LED lights display shows  C, D corresponding to the figures for the number of times.

3. Multi-segments stitching settings: 

1)How to enter multi segments stitching.


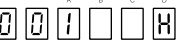

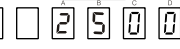


In standby mode, enter the user parameter 032, BAR, press S to enter, change parameter 0 to 1 or 2 confirm exit. Modified to be off 10 seconds then restart to take effect, then the button  light is multi-seam status.

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 \pm 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 \pm key, stitches number maximum adjustable 200-pin. (Hint: do not need segments their stitches number should be adjusted to 0).


4. Speed setting:

1) How to set speed:


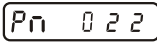


Key with  2-3 seconds display , then press , display , H is parameter name, 2500 is parameter content, showing the highest rotary speed is 2500r/min. Press to change the speed, press , then press and hold  2-3seconds, speed is set

5.START SEWING / END SEWING



Press , LED on means start sewing, LED off means end start sewing function

Press , LED on means start sewing, LED off means end start sewing function

6.Process piece numbers display and set function

In general sewing interface, press and hold , show  22 pieces (release show general sewing interface).holding  S, then press , show "PN.0" means start from 0, the multiplying number set parameter [0.28PN5]


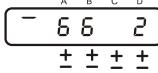
7. adjust the position of upper stitch

system get power then start it, press pedal forward then back to trim thread, if position is not good, then turn handwheel to stop at best upper stitch position, press  key and  key simultaneously, then off after 3 seconds, if "A" (on the first display tube) is flashing, the upper stitch is set successfully.

8. Adjustment reinforcement stitches

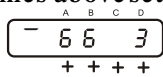
In the lockstitch models, the front and rear reinforcement stitches flush synchronization compensation need to be adjusted, before reinforcement stitch, after reinforcement, continuous reinforcement stitch, their compensation method is basically the same, now flush with a continuous reinforcement stitch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

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: next restart the system, the first number 3 will not flash).

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}	150~3000	2400	The highest speed setting when sewing with related machine models
[002. PSL]	Acceleration curve adjustment %	1~100	60%	Climb slope of the acceleration controller settings
[003. NUD]	Needle stop position selectio	UP/DN	DN	UP Upper needle stop position DN Below needle stop position
[004. N]	Start reverse sewing speed _{r/min}	150~2800	1000	Start reverse sewing speed setting
[005. V]	End reverse sewing speed _{r/min}	150~2800	1000	End reverse sewing speed setting
[006. B]	Continue reverse sewing speed _{r/min}	150~2800	1000	Continue reverse sewing speed setting
[007. S]	Slow start sewing speed _{r/min}	150~2800	400	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	300~4000	2000	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

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

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

[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
[015. SBA]	Release thread, cut thread electromagnet, cycle signal%	5~15	10	Electromagnet enforce cycle adjustment , bigger number, bigger cycle.
[016. BB]	pause time between 2 reverse sewing	0~800	20	0: close pause 1-800: bigger number longer pause time
[018. BT1]	Start reverse sewing compensate for 1	1~16	2	BT1、BT2=0 Invalid BT1、BT2=1~16 Early movement timing (1/8 stitch units)
[019. BT2]	Start reverse sewing compensate for 2		5	BT1、BT2=17~31 Delay move -Ment timing(1/8 stitch units)
[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]	End reverse sewing compensation 3	Early action 1~16 Delay action 17~31	5	BT3、BT4=0 Effective BT3、BT4=1~16 Early movement timing (1/8 stitch units)
[026. BT4]	End reverse sewing compensation 4		2	BT3、BT4=17~31 Delay move -Ment timing(1/8 stitch units)
[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	1	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 Reverse sewing AB、CD-F times (up to 99-stitch), both P1 ~ PF mode of operation 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	150	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	2	BT5、BT6=0 Invalid BT5、BT6=1~16 Early movement timing (1/8 stitch units)
[036. BT6]	Continue reverse sewing compensation 6		5	BT5、BT6=17~31 Delay move -Ment timing(1/8 stitch units)
[038. PM]	One touch type sewing speed reverse sewing to the high-speed setting	ON/OFF	OFF	OFF: According to the manual reverse sewing speed stages [006.B] deceleration operation One touch type reverse sewing high speed operation stage, will not slow down
[040. WON]	tension device loose end switch	0/4	4	0: close 4: open NOTE: angle of loose ends controlled by 【067.T1】

[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 ON: open soft start sewing function, match up with stitch number 【008.SLS】 and speed 【007.S】

2、 System parameters Barea

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)
[052. PA]	Front part stepping pedal the sewing speed response sensitivity settings	50 ~ 800	100	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	300	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	200	Low speed value adjustment
[061. FO]	Presser foot and reverse sewing in full operation time of the initial output ms	0 ~ 990	200	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
[065.SFM]	Safety switch signal form	0/1/2	0	0: Safety switch into force signal, normally open state must be maintained 1: Safety switch into force signal must remain normally closed 2: Turn off safety switch
[067. T1]	Catch thread starting mechanical angle (from the upper position to the mechanical 0 angle)	0 ~ 360	320	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
[069. M]	Stopping speed setting in midway	150 ~ 800	350	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 1 degree

[073.WF]	Delay time before presser foot actions	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 times	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	31 ~ 360	55	[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	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
GENERAL WARNING	ERR—00	Input signal self-test error	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; 2. DC bus voltage is low; 3. Driver module fault signal is not normal	1. Release the foot pedal back to the neutral position 2. Check the pedal signal cables are connected well
	ERR—01	Machine body feedback signal is not normal	1. Synchronizer is not normal, the needle upper position can not be detected 2. Sensor magnet off	
	PWROFF	Power off	1. 30W fuse problems 2. Systems no power	Power off, check all fuses, re-power
	ERR—03	The machine head is not running properly	1. Synchronizer is not normal, the needle upper position can not be detected 2. Sensor magnet off	
	ERR—04	Overcurrent, overvoltage, overtemperature, undervoltage	1. Motor power drive module fault 2. Momentary interference	
	ERR—05	DC bus power overvoltage	1. Braking resistor or braking fuse broken 2. Momentary interference	Power off the system checks
	ERR—06	Electromagnet power supply overcurrent	1. Electromagnet overload or short-circuit 2. Drive circuit faults 3. Momentary interference	Power off the system checks

	ERR—07	Motor stall	1. Mechanical jam 2. Trimming assembly have a problem 3. The encoder signal is not normal 4. Motor output HALL signal is not normal	Power off the system checks whether the normal mechanical properties testing machine
General warning	9	DC bus voltage is too low	1. AC input voltage is too low 2. There is a fault inside	Check the power voltage
	A	Stopping positioning error	1. MPD, SPD parameter setting error 2. Overload 3. The encoder signal is not normal 4. Synchronizer signal instability 5. Motor problems, output not enough	power off , check machine head and motor
	B	Exceed the maximum speed	1. Exceed the maximum speed on same direction 2. Over the opposite direction 300r/min 3. The encoder signal is not normal 4. Motor output HALL signal is not normal 5. Motor failure (such as demagnetization)	1. Between the control box and the motor drive line U/V/W connections are good or not 2. Whether the system has been reliably grounded
	C	Synchronizer self-test error	Synchronization is not plugged in	1. Power off, plug in the synchronizer, and then plug in power 2. Replace the synchronizer
	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 . 30seconds 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.