ENGLISH

H9500N ELECTRICAL CONTROL BOX INSTRUCTION MANUAL

Version:V1.00

PREFACE

Thank you for selecting our product. The introduction provides necessary knowledge and notes for using.

<u>Please read safety introduction carefully and understand them before</u> <u>using.</u>

1. The content of the introduction will be amended with the improvement of our product, the notice is not announced.

2. If you have any doubts or comments about our product and service, please contact after-sale service.

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1. Peration Screen

(1) Home Screen



(2) Toggle Screen (click icon 10 to enter)







(4) Front Reverse Stitch (Press Icon 1 long time to enter)



(5) Back Reverse Stich (Press icon 3 long time to enter)



(6) Counting pcs Set-up Screen (Click icon 12 to enter)



(7) Setting Option Screen (Click icon 15 to Enter)



(8) First Class Parameter Setting-up Screen (Click icon 27 to enter)



(9) Second Class Setting Screen (Press 28 to enter)



(10) Production Adjusting Setting Screen (Press Icon 31 to enter) Password is needed to enter, For Example the screen below:



Enter the right password to enter production adjusting screen



(11) Needle Position Calibrate Screen (Click icon 32 to enter)



(12) Needle Gauge Calibrate (Click icon 33 to enter)



(13) Needle Gauge Adjust (Needle gauge Compensating) Screen (Click icon 34 to enter)

Needle Gauge Adjust							
1mmForward	1mmBack						
2mmForward	2mmBack						
3mmForward	3mmBack	0	0	0	0		
4mmForward	4mmBack						
5mmForward	5mmBack			S	AVE		
					6		

(14) restore the factory interface (Press icon 36 to enter)



2. Icon Description





(end-closed stitching, start-closed stitching, start and endclosed stitching) 23. Parameter Description: parameter 2B2 is expressed as secondary parameter B2, entering the password is required for entering the second and third level parameters.



3. Instructions

(1) Foot pedal sensitivity adjustment

Foot pedal action begins with initial position ① (parameter 136), slowly step forward to ② (parameter 137) Start sewing at low speed, Continue stepping on to ③ (parameter 138) then start accelerate, Step deeper to ④ (parameter 139) to reach the maximum speed. The sewing speed between the ②③ segments is maintained, and the stepless speed regulation process between the ③④ segments;

1. When the foot pedal starts from the initial position ① (parameter No. 136), the presser foot lifts automatically when stepping slowly to ⑤ (parameter No. 135); 2. When the foot pedal comes from the initial position ① (parameter 136) Initially, the thread trimming operation will be completed automatically when stepping slowly to ⑥ (parameter #134). 3, each parameter value needs to be guaranteed (parameter No. 134)



(2) Restore factory settings Enter the Setting Option Screen



Press and hold the he bottom (restore custom parameters) for a long time, until the following text box appears, no operation is allowed, and the system automatically jumps to the main interface after it is automatically completed.

The parameters are being transferred .Please wait , When transmission completed ,interface will jump automatically.

(3) Needle gauge calibration

Enter the needle gauge calibration interface(Article 12 of the first item);



I. Enter the needle gauge calibration interface(Article 12 of the first item) II. The machine does not thread, place an A4 paper under the presser foot; III. Step down the foot control device to make the machine run at a speed of over 3,000 rpm;

IV. Adjustment parameters:

Paper moves forward, and adjusts backward calibration parameters; Adjust the forward, and adjusts forward calibration parameters; Until A4 paper does not move forward or back

V. When after adjustment, return to the main interface.

(4) The needle position calibration

Click to enter the needle calibration interface (Click icon 32 to enter), press the interface prompt operation, and click save to make the data become 0.



(5) Multi-function switch adjustment

Enter the setup selection interface and enter the shortcut function selection according to the icon 25 in item seventh of the first item. $_{\circ}$



(6) Simple programming seaming Settings

Enter the setting selection interface, long press the icon 22 in item 2 of the first item, and enter the programming slot setting (W slot is valid).



(7) Stitch length compensation (%Confirm the mechanical position and feed synchronization are correct, and the needle pitch calibration has been adjusted as required)

Select the stitch length that needs to be adjusted in this interface, and adjust it directly in the following Numbers. After the adjustment is OK, confirm to press save.



(8)Language setting

Enter the Language setting interface((Click icon 40 to enter)). Choice language. Back to the Home Screen.



4. Parameter table

Classification	Object	Defaul t	Range	Comment		
	1 0 0	200	$100^{\sim}800$	Start sewing speed		
	1 0 1	4000	$200^{\sim}5000$	Maximum speed of free sewing (global maximum speed)		
	1 0 2	3000	$200^{\sim}5000$	Maximum speed of fixed-length sewing		
	1 0 3	3000	$200^{\sim}5000$	Maximum speed limit of manual backstitch		
	1 0 4	200	$100^{\sim}800$	Needle filling speed		
Speed	1 0 5	250	$100^{\sim}500$	Thread trimming speed		
	106	0	0 / 1	Soft start mode 0: Slow start only after trimming 1: Slow start after trimming and intermediate stop		
	1 0 7	2	$1^{\sim}9$	Soft start stitch count		
	1 0 8	200	$100^{\sim}800$	Soft start speed		
	1 1 0	1800	$200^{\sim}2200$	Front-end back tacking speed		
	1 1 1	1800	$200^{\sim}2200$	Rear-end back tacking speed		
	1 1 2	1800	$200^{\sim}2200$	Continuous back tacking speed		
	113	24	$1^{\sim}70$	Stitch length in condensed sewing (0-50 represents 0 - positive 5mm, 70-120 represents 0 - negative 5mm)		
	1 1 4	20	$1^{\sim}70$	Automatic close stitch number before thread trimming		
	1 1 5	24	$1^{\sim}70$	Start automatic close stitch number		
D	1 1 6	0	$0^{\sim}1$	Pattern sewing switch		
Keinforcing	1 1 8	2	1~8	Total number of sections in pattern sewing		
parameters	1 1 B	0	0~2	Disconnection detection mode option (0. off; 1. detection with delay of certain stitches after trimming; 2. start detection when speed exceeds the threshold)		
	1 1 C	0	$0^{\sim}99999$	Delayed stitch number in disconnection detection mode 1		
	1 1 D	0	$0^{\sim}99999$	Speed threshold in disconnection detection mode 2		
	1 1 E	0	$0^{\sim}99999$	Disconnection detection sensitivity (alarm if no signal is received after continuous X stitches)		
Reinforcing sewing mode	120	0	0 / 1 / 2 / 3	<pre>Front-end back tacking work mode 0: Gently press the pedal to activate automatic initial back tacking. 1: Stop arbitrarily by pedal control. 2: Action controlled by [CT] time after needle stops at upper fixed position 3: Action controlled by [CT] time after needle stops at lower fixed position</pre>		

				Operation mode option after front-end back
				tacking is completed:
				0: Continue sewing after front-end back
	$1 \ 2 \ 1$	0	0/1/2	1. Stop automatically after front-ond back
				tacking
				2. Automatic trimming after front-end back
				tacking
				Operation mode option after fixed-length
	1 0 0	0	0 /1	sewing is completed:
	122	0	0/1	0: Rear-end back tacking
				1: Stop and standby (compensation allowed)
				Rear-end back tacking work mode
				0: Gently press the pedal to activate
				automatic initial back tacking.
Reinforcing	123	0	0/1/2/3	1: Invalid
sewing mode	1 0	Ŭ	0, 1, 1, 0	2: Action controlled by [CT] time after needle
				stops at upper fixed position
				3: Action controlled by [CI] time after needle
				stops at lower fixed position
				w back tacking work mode
				o: Gentry press the pedar to activate
				1. Stop arbitrarily by pedal control
	1 2 4	0	0/1 / 2 / 3	2: Action controlled by [CT] time after needle
				stons at upper fixed position
				3: Action controlled by [CT] time after needle
				stops at lower fixed position
		0	$0{\sim}99$	Idle stop needle count state between fixed
	1 2 E			stitch sections: 0 counting allowed 1 stop
			-	counting
	12F	1800	$200^{\sim}2200$	Speed in condensed sewing
				Pedal curve mode:
		2		0: Automatic linear slope (automatically
	1 3 0		0 / 1 / 2 / 3	calculated according to the maximum speed)
				1: Iwo-section slope
				2: Fower curve
				Two-section slope: mid-section speed RPM
	$1 \ 3 \ 1$	3000	$200^{\sim}4000$	(turning point speed of two-section slope)
			21	Two-section slope: mid-section pedal analog
	1 3 2	800	0~1024	(between parameter 3.8 and 3.9)
Pedal				Power curve:
	133	1	1 / 2	1: Squared;
				2: Open;
	1 3 4	90	$0^{\sim}1024$	Pedal thread trimming position
	1 2 5	300	$0^{\sim}1024$	Pedal presser foot lift position (greater than
	гээ	300	0 1024	the value of previous parameter in order)
	136	460	$0^{\sim}1024$	Pedal back to center position (greater than
	100	TUU	0 1024	the value of previous parameter in order)
	$1 \ 3 \ 7$	480	$0^{\sim}1024$	Pedal stepping forward position (greater than
		100	0 1001	the value of previous parameter in order)

				Pedal low speed operating position (upper		
	1 3 8	580	0~1024	limit) (greater than the value of previous		
				parameter in order)		
	1 2 0	062	$0^{\sim}1024$	Pedal simulation maximum value (greater than		
	139	902	0 1024	the value of previous parameter in order)		
	1 3 A	100	$0^{\sim}800$	Pedal simulation maximum value		
				Pedal back to center immediately thread		
	1 3 B	0	0 / 1	trimming option:		
	100	U	071	0: Off		
Pedal				1: On		
reddi				Presser foot position presser foot lift		
	13C	1	0 / 1	function option:		
	100	1	0 / 1	0: No lift		
				1: Lift		
				Thread trimming position presser foot lift		
	13D	1	0 / 1	function option:		
		-	<i>o , </i>	0: No lift		
				l: Lift		
	13E	1	$1^{\sim}800$	Presser foot lift delay time after thread		
				trimming		
				Automatic run to up needle position option		
	1 4 0	1	0 / 1	after power on:		
			- , -	0: Run to position		
				1: Not run to position		
				Automatic back tacking function option: (not		
	1 4 1	1	0 / 1	allowed for head without automatic back		
	141	1	0 / 1	(a. Pash tasking not allowed)		
				0: Back tacking not allowed		
				1: Dack tacking allowed		
			0 / 1	O: Tuki mode Action during sowings or upon		
	1 1 2	0		intermediate step		
	142			1: Prother mode Action only during cowing		
				acomponente unon intermediate stop		
Custom	146	100	1~800	Half stitch compensation button command time		
setting 1	1 + 0 1 4 7	150	1^{800}	One stitch compensation button command time		
	1 1 1	100	1 000	Button compensation mode: 0: press time		
	148	0	0/1/2	control: 1: half stitch compensation: 2: one		
	1 1 0	Ū	0/1/2	stitch compensation		
	149	0	$0^{\sim}10$	Presser foot slow down function switch		
	1 4 A	0	0^{10}	Pedal acceleration curve filter coefficient		
	1 4 B	0	1-200	Slow release foot level		
	1 4 0	-	1~0000	Time of chopping on for presser foot slow down		
	14C	1	1 9999	(ms)		
	1 4 5	4	0~0000	Time of chopping off for presser foot slow		
	14D	4	0 9999	down (ms)		
				Compensation function: 1. stitch compensation		
	14E	2	1/2	allowed after thread trimming 0. stitch		
				compensation not allowed after thread trimming		

$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		1 5 0	1	1~100	Stitch count ratio setting			
Counting mode Stitch counter mode option: 0: No counting 1: Count up according to stitch count, and recount automatically after the set value is count 2: Count down according to stitch count, and recount automatically after the set value is count 3: Count up according to stitch count, and motor stops automatically after the set value is count, restart by S4 [152.1N1] = CRS setting or A button on the panel required. 4: Count down according to stitch count, and motor stops automatically after the set value is count stops automatically after the set value is count frimming counter function ratio setting 1 5 4 1 1~9999 Counting mode 1 5 3 1 1~100 Trimming counter function ratio setting 1 5 4 1 1~9999 Trimming count setting 1 Count up according to Trimming count, and metor stops automatically after the set value is count 2: Count down according to Trimming count, and recount automatically after the set value is count 3: Count up according to Trimming count, and motor stops automatically after the set value is count, restart by S4 [152.1N1] = CRS setting or A button on the panel required. 4: Count down according to Trimming count, and motor stops automatically after the set value is count (2 automatically after the		151	1	$1 \sim 9999$	Stitch count upper limit setting			
Counting mode 0: No counting 1: Count up according to stitch count, and recount automatically after the set value is count 2: Count down according to stitch count, and motor stops automatically after the set value is count. 1:5:2 0 0~4 1:5:3 1:1:2:0:0 1:5:3 1:1:2:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:					Stitch counter mode option:			
1 5 2 0 0~4 1: Count up according to stitch count, and recount automatically after the set value is count 2: Count down according to stitch count, and meter stops automatically after the set value is count 2: Count down according to stitch count, and meter stops automatically after the set value is count 3: Count up according to stitch count, and meter stops automatically after the set value is count. 3: Count up according to stitch count, and motor stops automatically after the set value 1 5 3 1 1~~100 Trimming counter function ratio setting 1 5 4 1 1~9999 Trimming count setting 1 5 5 0 0~4 0. No counting 1 5 5 0					0: No counting			
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$\begin{array}{ c c c c c c c c c c c c c c c c c c c$					count			
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Counting mode 153 1 $1\sim100$ Trimming counter function ratio setting 154 1 $1\sim0999$ Trimming counter mode option: $0: No counting1: 5 411\sim9999Counting mode15411\sim0999Trimming counter mode option:0: No counting1: Count up according to Trimming count, andrecount automatically after the set value iscount2: Count down according to Trimming count, andrecount automatically after the set value iscount2: Count up according to Trimming count, andrecount automatically after the set value iscount3: Count up according to Trimming count, andmotor stops automatically after the set valueis count of the set value iscount3: Count up according to Trimming count, andmotor stops automatically after the set valueis count of the set valueis count down according to Trimming count, andmotor stops automatically after the set valueis count of the set valueis count is count is count is count is count is count and trimmingcount 0.11 \times 10^{-100}15800/1Counting switch (stitch count and trimmingcount 0: 0 = 0.11 \times 10^{-100}15800/1Counting switch (stitch count and trimmingcount 0: 0 = 0.11 \times 10^{-100}15800/1Counting switch (stitch count and trimmingcount 0: 0 = 0.11 \times 10^{-100}1551 = 0^{-2}0^{-2}0^{-2}1551 = 0^{-2}0^{-2}0^{-2}1551 = 0^{-2}0^{-2}1550 = 0.2400^{-2}2 = 200 = 0.2402 = 2 = 10 = 240$					is count, restart by S4 [152.INI] = CRS			
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Counting modeIf Imming counting15015000~415000~41500~41500~41500~41510151011151011151022102221222222222222221022322222222222222222<		104	1	1, - 99999	Trimming counter mode ention:			
$1550 \text{ mode} \begin{bmatrix} 1 & 5 & 0 \\ 1 & 5 & 5 \end{bmatrix} = 0 \begin{bmatrix} 0 & -4 \\ 0 & -4 \end{bmatrix} \begin{bmatrix} 1 & 0 & 0 & -4 \\ 0 & 0 & -4 \end{bmatrix} = \begin{bmatrix} 1 & 0 & 0 & 0 & -4 \\ 0 & 0 & -4 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & $	Counting mode				0: No counting			
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$\frac{155}{2} = 0$ $\frac{155}{2} = $					recount automatically after the set value is			
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Stop mode2200					3. Count up according to Trimming count and			
IndicitIndicitSet valueis count, restart by S4 [152. INI] = CRS setting or A button on the panel required. 4: Count down according to Trimming count, and motor stops automatically after the set value is count by C4 [150 INI] = CRC 158 00/1 158 00/1Counting switch (stitch count and trimming count) (0 adjustable, 1 not adjustable) 158 00^24095 $15F$ 10^2Stroke switch analog minimum $15F$ 1 0^2 Stroke switch (0. off; 1. forward; 2. positive/negative) 220 360 $60 \sim 360$ Trimming pullback function (stop position after trimming) 222 360 $200 \sim 360$ Upper needle position adjustment in intermediate stopUpper needle position adjustment in intermediate stop					motor stops sutomatically after the set value			
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2 2 2 360 200~360 Upper needle position adjustment in intermediate stop	Stop mode	$2\ 2\ 1$	0	$0\sim\!240$	Reverse angle before sewing (increasing			
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242 0 0~359 relative to the position of upper pool		2 4 2	0	0~359	relative to the position of upper peodle			
Head related nosition sensor)	Head related			0 000	nosition sensor)			
parameters 2 4 3 175 $0\sim359$ Lower needle position mechanical angle	parameters	2 4 3	175	0~359	Lower needle position mechanical angle			
Presser foot release protection time (from	POLOMOTOLD			-~-	Presser foot release protection time (from			
2 4 4 200 0 800 presser foot release to needle start action		2 4 4	200	$0^{\sim}800$	presser foot release to needle start action)			

5. Monitoring parameters

Monitoring parameters	Comment
1 0	Stitch count
1 1	Trimming count
1 2	Real machine speed
1 3	Hall state
14	Sector number
1 5	Motor electrical angle
16	Optical pulse count per revolution
2 0	Busbar voltage
2 1	Machine speed
2 2	opposite current
2 3	Initial angle
2 4	Mechanical angle
2 5	Sampling value of pedal voltage
26	Actual gear ratio of head
2 7	Motor accumulated running hours (Hour)
28	High order part of DSP software version
29	Low order part of DSP software version
2 B	Analog input 2 sampling value (head analog button)
	Highest position: reverse sewing button;
2.0	Second position: safety switch (Turnover)
20	Third position: needle filling (The one in 2 Halls)
	Fourth position: over oil
	Highest position: low oil;
2 D	Second position: broken line
	Third position: sensor
	Fourth position: head analog button

Error code	Code meaning	Solution
		Turn off the system power and re connect the power after 30 seconds. If the controller is
Err-01	Hardware overcurrent	still not working properly, please replace the controller and notify the manufacturer.
Err-02	Power off reminding	Please wait 30 seconds again to reopen the power switch
Err-03	Undervoltage system	Disconnect the controller power supply and check if the input voltage is low (less than 176V). If the supply voltage is low, restart the controller after the voltage is back to normal. If the voltage is restored to normal, the startup controller is still not working properly. Please replace the controller and notify the
Err-04	Overvoltage during shutdown	Disconnect the controller power supply and check if the input voltage is high (above 264V). If the supply voltage is too high, restart the controller after the voltage is back to normal. If the voltage is restored to normal, the startup controller is still not working properly. Please replace the controller and notify the manufacturer.
Err-05	Overvoltage during operation	Disconnect the controller power supply and check if the input voltage is high (above 264V). If the supply voltage is too high, restart the controller after the voltage is back to normal. If the voltage is restored to normal, the startup controller is still not working properly. Please replace the controller and notify the manufacturer.
Err-06	Electromagnet circuit failure	Turn off the system power, check whether the solenoid connection is correct, whether there are loose, damaged and so on. If it is correct, restart the system. If it is still unable to work, replace the controller and notify the manufacturer.
Err-07	Current detection loop failure	Turn off the power of the system and re connect the power after 30 seconds to see if it works properly. Retry several times. If the fault occurs frequently, replace the controller and notify the manufacturer.
Err-8	Motor stalling	 Check whether the motor power cord is off Check whether the machine head is stuck Check whether motor code wheel cord is loose Check whether the needle up position is correct (at the case of thread trimming movement) If the malfunction have not been solved yet , please contact the after-sale service.
Err-10	HMI communication failure	Check whether the connection between control panel and controller is falling off, loosening or breaking, and restore it to normal and restart the system. If it is still not working properly, please replace the controller and notify the manufacturer.

6. Table of error codes/cause /remedy

Err-11	Signal failure of head needle stop	Please check whether the motor electrical connection is normal
Err-12	Motor initial angle detection failure	Please try again 2-3 times after power failure. If the fault is still reported, replace the controller and notify the manufacturer.
Err-13	Motor hall failure	Turn off the system power, check whether the motor sensor connector is loose or fall off, restore it to normal and restart the system. If it is still not working properly, please replace the controller and notify the manufacturer.
Err-14	DSP EEPROM read/write failure	Turn off the system newer and restart the system
Err-15	Motor overspeed protection	after 30 seconds. If it is still not working
Err-16	Motor reversal rotation	properly place replace the controller and
Err-17	DSP watchdog timer failure	property, prease reprace the controller and
Err-18	Motor overload	
Err-19	Safety switch (Overturn table)	
Err-20	0il refilling time protection	
Err-21	Location out-of-tolerance (Similar to stalling)	
Err-22	Stepper motor overcurrent	
Err-23	Steper current sampling fault	
Err-24	Stepper origin finding fault	 Please check whether the stepper motor electrical connection is normal Check whether the mechanical parts connected to the stepper motor are normal.
Err-25	Stepper position failure to reach fault	
Err-26	Oil shortage alarm (Unused temporarily)	
Err-27	Over-oil alarm (Unused temporarily)	
Err-28	Wire break detection alarm	
Err-29	0il alarm reminder	
Err-30	0il alarm fault	