

High series manual V1.0

1. Safety instruction

- Please read the operation manual and related sewing machinery datasheet carefully before correct use.
- 1.1 (1) Power voltage and frequency: please refer to motor and control box nameplate.
(2) Interference from electromagnetic wave: please keep far away strong magnetic or high radiation environment in order to avoid obstructions and make to misoperation.
(3) Grounding: to avoid the noise obstructions or leakage of electricity accident (including sewing machine, motor, control box and positioner).
- 1.2 Please make sure power off at least 1min and then can open control box cover, because there are dangerous high voltage.
- 1.3 Please turn off the power while repairing or wearing needle in order to protect operator's safety.
- 1.4  Used where potential dangers exist.
 Used where high voltage and electric danger exist.
- 1.5 Product warranty period of one year on condition that this machine is operated correctly and no man-made damage.

2. System parameter table

591 : 9610 Roller feed postbed sewing machine (pneumatic) 591b : 9630 (electromagnet)

No	Project	Content	Applicable models	Setting range	The default value	Level
1	Sewing speed	Set sewing speed	591 591B	200~3500(rpm)	3000	I
2	Soft-start function	0 : No soft-start function 1~99 : Soft start stitches	591 591B	0~99	3	I
3	Ornamental bartacks	0 : Invalid 1 : Effective	591 591B	0/1	0	I
4	Fixed-length seam sewing speed	Set fixed-length seam sewing speed	591 591B	200~3500(rpm)	2500	I
5	Sewing mode	The sewing mode setting (without a nose operation box) 0 : Free sewing ; 1 : Simple Sewing 2 : Fixed stitches ; 3 : Overlapped sewing	591 591B	0~3	0	I
6	Forward stitches, bartack at the start of sewing	Forward stitches, bartack at the start of sewing (without nose operation box)	591 591B	0~32 (Needle)	3	I
7	Reverse stitches, bartack at the start of sewing	Reverse stitches, bartack at the start of sewing (without nose operation box)	591 591B	1~32 (Needle)	3	I
8	Forward stitches, bartack at the end of sewing	Forward stitches, bartack at the end of sewing (without the nose operation box)	591 591B	1~32 (Needle)	3	I
9	Reverse stitches, bartack at the end of sewing	Reverse stitches, bartack at the end of sewing (without the nose operation box)	591 591B	0~32 (Needle)	3	I
10	The number of steps of the fixed stitches	The number of steps of the fixed stitches (without nose operation box)	591 591B	1~7 (Paragraph)	1	I
11	Step 1 stitches		591 591B	1~99 (Needle)	15	I
12	Step 2 stitches		591 591B	1~99 (Needle)	15	I
13	Step 3 stitches		591 591B	1~99 (Needle)	15	I
14	Step 4 stitches		591 591B	1~99 (Needle)	15	I
15	Step 5 stitches		591 591B	1~99 (Needle)	15	I
16	Step 6 stitches		591 591B	1~99 (Needle)	15	I
17	Step 7 stitches		591 591B	1~99 (Needle)	15	I
18	The fixed stitches one-shot mode	The fixed stitches one-shot mode (without nose operation box set) 0 : Invalid 1 : Effective	591 591B	0/1	0	I
19	Function of stop after bartack at the start of sewing	Function of stop after bartack at the start of sewing 0 : Invalid 1 : Effective	591 591B	0/1	0	I
20	The manual switch function of the reverse feed stitching of sewing	0 : Only reverse feed stitching ; 1 : And needle compensation ; 2 : Only reverse feed stitching , standby does not work	591 591B	0~2	0	I
21	Soft-start speed 1	The first stitch speed	591 591B	100~3000(rpm)	600	I
22	Soft-start speed 2	The second stitch speed	591 591B	100~3000(rpm)	1000	I
23	Soft-start speed 3	The third stitch speed	591 591B	100~3000(rpm)	1500	I
24	Function of soft-down of presser foot	Function of soft-down of presser foot 0: Invalid 1: Valid	591 591B	0/1	0	I
25	Enable presser foot lift	0: Disable 1: Enable	591 591B	0/1	1	I
26	Enable automatic presser foot lift	0: Invalid 1 : Enable when stopped	591 591B	0/1	0	I
27	Up-position function	Automatic Up position function Power-on 0: Invalid 1: Valid	591 591B	0/1	0	I
28	Safety switch signal mode	0: Normally open 1: Normally closed 2: No protection	591 591B	0/1/2	0	I
29	The time of soft-down of pressure foot	The time of soft-down of pressure foot (time longer, down more slower)	591 591B	50~500(ms)	300	I
30	Unit of bobbin thread counting down	Unit of bobbin thread counting down 0: Invalid 5/10/15/20: count 5/10/15/20 stitches	591 591B	0/5/10/15/20	0	I
31	The bobbin thread initial total	The bobbin thread initial total	591 591B	200~4000	1600	I
32	Ornamental bartacks pause time	Ornamental bartacks pause time	591 591B	5~500(ms)	100	I
33	Times of reverse feed stitching sewing	0: double ; 1 : Four	591 591B	0/1	0	I
34	Standard bartacks, pedal speed source choice	0: automatic standard bartacks speed 1: pedal analog speed	591 591B	0/1	0	I
35	Cutting rate	0 : No function 1~20 : Every cutting rate 1~20, workpiece plus 1	591 591B	0~20	1	I
41	Slow speed	The lowest pedal speed	591 591B	100~400(rpm)	200	I
42	Pedal curve selection	0 : Normal; 1 : Slow acc. ; 2 : Fast acc.	591 591B	0/1/2	0	I
43	Reverse limited feed speed	Reverse limited feed speed, when the manual switch closed	591 591B	500~1500(rpm)	800	I
*44	Cutting speed	Cutting speed	591 591B	100~400(rpm)	280	I
45	Reverse limited feed speed enable	0 : Disable 1 : Enable	591 591B	0/1	0	I
46	Delay Sewing time, when presser foot down	Delay Sewing time, when presser foot down	591 591B	0~800(ms)	200	II
47	Time of presser foot magnet full voltage output	Time of presser full voltage output	591 591B	0~800(ms)	150	II
48	Presser foot magnet voltage output duty cycle	Presser foot voltage output duty cycle	591 591B	0~100	50 30	II
49	Presser foot magnet lift holding time	Presser foot magnet lift holding time	591 591B	1~60(s)	12	II
50	Time of reverse feed stitching magnet full voltage output	Time of reverse feed stitching full voltage output	591 591B	0~800(ms)	120	II
51	Reverse feed stitching magnet duty cycle	Reverse feed stitching magnet duty cycle	591 591B	0~100	50	II
52	Reverse feed stitching magnet holding time	Reverse feed stitching magnet holding time	591 591B	1~60(s)	12	II
53	Speed of bartack at the start of sewing	Speed of bartack at the start of sewing	591 591B	100~3000(rpm)	1500	I
54	Bartack at the start of sewing compensation 1	Bartack at the start of sewing compensation 1	591 591B	0~100	20	I
55	Bartack at the start of sewing compensation 2	Bartack at the start of sewing compensation 2	591 591B	0~100	8	I
56	Speed of bartack at the end of sewing	Speed of bartack at the end of sewing	591 591B	100~3000(rpm)	1500	I
57	Bartack at the end of sewing compensation 1	Bartack at the end of sewing compensation 1	591 591B	0~100	20	I
58	Bartack at the end of sewing compensation 2	Bartack at the end of sewing compensation 2	591 591B	0~100	8	I
59	Overlapped sewing speed	Overlapped sewing speed	591 591B	100~3000(rpm)	1500	I
60	Overlapped sewing speed compensation 1	Overlapped sewing speed compensation 1	591 591B	0~100	20	I
61	Overlapped sewing speed compensation 2	Overlapped sewing speed compensation 2	591 591B	0~100	8	I
69	Down needle position	Down needle position	591 591B	120~240	60	I
70	Function of the reverse revolution after stopping up-position	0: Invalid 1: Valid	591 591B	0/1	0	I
71	Reverse revolution angle	Reverse revolution angle	591 591B	0~90(Degree)	45	I
75	Needle position adjustment	Reference 3. Gearing and adjustment	591 591B	0~240	0	II
79	Parameter restore	Set to 5: Restore the current level of the factory parameters	591 591B	0~15	0	I
80	Sewing maximum speed	Sewing maximum speed	591 591B	200~3500(spm)	3000	II
81	Lubrication prompts	0: Invalid ; 50~1000: Suggestion time	591 591B	0~1000 (Hour)	0	II
83	Retry function	This function is used when needle cannot pierce materials. 0: Normal ; 1: Retry function is provided.	591 591B	0~15	0	II
85	Cutting magnet pull angle	Cutting magnet pull angle	591 591B	0~120	60	II
87	Cutting magnet release angle	Cutting magnet release angle	591 591B	270~360	320	II
88	Loose magnet pull angle	Loose magnet pull angle	591 591B	270~360	300	II
89	Up dead position angle	Up dead position angle	591 591B	270~360	290	II
90	Wheels ratio	Wheels ratio	591 591B	800~1200	1000	II
92	Pedal presser foot lift confirm time	Pedal presser foot lift confirm time	591 591B	10~300(ms)	80	II

Do not change the set values With * mark as they are functions for maintenance. If you change the factory initial settings, there may be damage to the machine or reduce the risk of machine performance. If it is necessary to change, you need professional guidance. But sometimes in order to improve the functionality and performance of the sewing machine, it is possible at any time to change the function.

3. Gearing and adjustment

- Please press the P key for more than 3 seconds at the default interface, and then input the password "1111".
- Press the P key for seconds into the parameter.
- Select the No.75 parameter, run machine at 200rpm speed.
- Stop sewing machine, after running for several turns.
- Check the position of the needle, and then turn the hand wheel till the needle's point touches the board (as shown in the right figure, and the value of the No.75 will change at the same time)
Step the pedal again and check that if the needle's point touches the board after the machine stopped, if not, adjust the hand wheel again.
- Press the P key, and then end the operation.

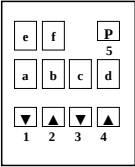


4. Operation box use

4.1 Description of function keys

Function	Button	Described
Bartack (start sewing)		Execution start bartack once or twice
Bartack (end sewing)		
Free sewing		Step the pedal, then running machine, return it, then stopped, step pedal back, then do cutting and other action.
Overlapped sewing		1. Step the pedal, then running machine, the overlapped number set by the E segment, up to 99 times 2. This sewing is one-shot mode. 3. Bartack at the start & end of sewing is not valid.
fixed stitches mode		1. Step the pedal, running CD sewing stitches. 2. Return the pedal, sewing immediately stopped, step again, running the remainder stitches. 3. When finished CD stitches, then execute to end bartack (optional) and cutting etc. action.
Cutting		Set or cancel the trimming function
stitch compensation		Perform needle up/down compensating stitching, or one stitching compensating or more stitching according to time long or short.
Speed adjust key		Decrease speed keys, the display automatically switches to the speed setting. Simple sewing, free sewing effective.
		Increase the governor keys, the display automatically switches to the speed setting. Simple sewing, free sewing effective.

4.2 The control box operation panel describe
As shown in the right figure.



4.3 sewing function setting

Operation panel default mode:

Needle position, trimming, start bartack and end bartack

- 1: choice of needle position a : 0 up needle position ; 1 lower needle position
2: choice of trimming b : 0 no-trimming trimming 1 trimming
3: choice of start bartack c : 0 no ; 1 AB double ; 2 ABAB four
4: choice of end bartack d : 0 no ; 1 CD double ; 2 CDCD four

4.4 Function parameter setting

Press the P key long to enter the function parameter setting state at the default interface.

Abcd position show parameter value, can be modified by the key 34; ef position show parameter index, can be modified by key 12.

Press P can save the current parameter values, then exit the parameter setting mode. Press 1234 key short time, then update every time, press long time, update continuance and faster.

Note: When the system is running, can not enter the parameter setting mode; unless you exit the parameter setting mode, otherwise the system can not run.

4.5 System monitor state

Press the P key, at the same time press key 1, can enter this interface at the default interface.

JJ	Work pieces	DX	Bobbin thread value	1	Motor speed	2	Motor current	3	Bus voltage
4	Pedal voltage	5	mechanical angle	6	motor angle	7	Software Version	8	machine model

5. Error codes

Error Code	Contents	Possible reasons	Checking and treatment
E011 E012 E013 E014	Motor signal error	Motor position sensor signal failure	If electric engine plug is well contacted; if electric engine signal detecting device has been broken; if sewing machine handwheel correctly installed.
E015	Model type error	Unable identify operating box model type	Check operating box
E021 E022 E023	Motor overload	motor stall motor overload	If electric engine plug is well contacted; if machine head or thread-cutting mechanism has been blocked completely; f materials are too thick; Electrical signal detection signal whether the normal.
E101	Hardware drivers fault	Current detection abnormal Driving hardware error	Current detection loop system is working properly; Whether the damage to the device driver.
E111 E112	Voltage too high	High input voltage Brake circuit fault Voltage detection error	System into line voltage is too high; Braking resistance are working properly; System voltage detection circuit are working properly.
E121 E122	Voltage too low	Actual low voltage Voltage detection is wrong	If the voltage on the inlet wire is too low Whether the system voltage detection circuit the normal work.
E131	Current circuit fault	Current detection abnormal	Current detection loop system is working properly.
E133	Oz circuit fault	Oz circuit fault	Oz circuit system is working properly.
E151	Magnet circuit error	Over current magnet circuit	If machine head magnet suffers short circuit Electromagnet circuit is working properly.
E201	over current	Current detection error	Current detection loop system is working properly Electrical signal is normal.
E211 E212	Abnormal motor operation	Current or voltage detection error	If electric engine plug is well contacted; If electric engine signal is matched.
E301	Communication error	Sci circuit error	if operation box plug is well contacted; if operation box components are damaged.
E302	Operation inner failure	Sci circuit error	To check whether the operating box is damaged..
E402	Pedal ID fault	Pedal verification fault	Pedal connection is loosen.
E403	Pedal zero position fault	The pedal zero position over range	The pedal is damaged or it is not under stop state when correction.
E501	Safety switch fault	Safety switch effective	Put down the head or check turned up switch.
P.oFF	Power off Display	Power off	Wait for power supply to resume.

Note: 1. Sewing abnormal action (speed electromagnet work abnormal) : in the control interface view model is correct;

2. Turn up E501 fault when: sure it is normal to switch detection, temporary use can change the P-28 parameters;

3. If the above according to check the project cannot rule out fault, please seek technical support.

6. Accessory

NO	Product name	Amount	Product specification	Confirm	Remarks
1	Ball section connecting rod	1			
2	Electric control box	1			
3	Operating box	1	EP-003		
4	Pedal	1	PL-303		Including stand
5	Machine press key	1			
6	Ctrolling box fixed screws	3	M5×25		Accessory box
7	Pedal fixed screws	3	M5×25		Accessory box
8	Stand connector fixed cover	1			Accessory box
9	Connector fixed screws	1	M5×15 Self-tapping		Accessory box
10	Operating box stand fixed screws	1	M6×16		Accessory box
11	Motor and stand fixed screws	4	M5×20		Accessory box
12	Operating box fixed screws	3	M4×8/ plated with blue and white zinc		Accessory box
13	Motor	1	80SF110-B3000-A01		
14	The instructions	1			
15	Certificate	1			
16	Desiccant	1			