

Facility Integral employ directions V1.2

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(inculding 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 safty.
- 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.Parameter list of lockstitch sewing machine

Model comparison table: A: 580A Sewing machine B:580A Thick material Sewing machine C:580A Synchronous machine

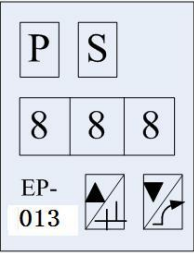
No	Item	Range of setting	Defailure Value	Model	Remarks
1	Sewing speed	200~2500	2000	C	(Display the range of 20~200, the actual representative 200~2000, the same)
		200~3500	3000	B	
		200~5000	3700	A	
2	Number of stitches for soft start	1~10	2	All	
3	Soft start speed 1	200~2000	600	All	
4	Soft start speed 2	200~2000	1000	All	
5	Soft start speed 3	200~2000	1500	All	
*6	acceleration time	1~250	15	All	smallest unit 0.1s
*7	Deceleration time	1~250	15	All	smallest unit 0.1s
8	Simple sewing model setting	0~1	0	All	0: Invalid 1: Effective
9	Needle positioning upon energization	0~1	0	All	0: Don’t find needle stop position 1: Find needle stop position
10	signal mode for turn/lift switch	0~2	0	All	0: always open 1: always close 2: Invalid
11	Pedal curve selection	0~2	0	All	0:Normal 1:Accelerate the slow 2:Fast acceleration
20	Factory parameter restore	0~2	0	All	0: Do not restore 1: The restoration of normal parameters 2: Recovery of all parameters
*21	Highest sewing speed	200~2500	2500	C	
		200~3500	3500	B	
		200~5000	4000	A	
*22	Low-speed stress-application gear election	0~15	2	All	0: Without afterburner 1~15: Too thick boosting gear
*23	Needle position adjustment	0~240	40	C	The smallest unit of 1 degrees
			234	A B	
*25	The neutral position of the pedal	-10~8	0	All	
*26	Pedal travel upon start	5~33	13	All	
*27	Pedal travel upon acceleration	5~79	33	All	
*28	Pedal travel at highest rotation speed	5~125	90	All	
*29	Pedal stroke of back stepping motion	-23~-10	-13	All	
*30	test mode	0~3	3	All	0: Time pattern 1:number of needle pattern 2: a simple pattern 3: The factory pattern
*31	test g rate	300~2500	2000	C	
		300~3500	2500	B	
		300~5000	4000	A	
*32	test running time	1~600	30	All	The smallest unit of 0.1s
*33	test pause time	1~600	20	All	The smallest unit of 0.1s
*34	Number of test needles	1~99	30	All	
*40	Model setting	0~3	3	All	The models set manually, automatic switching program

Note: without * identified as common parameters, with * mark for the advanced parameters, the only access to the advanced parameters, P20 can be set to 2, P20 is automatically return 0.

3. Instructions for Operation Box

3.1 key functional specification

No	Keys	Functions	No	Keys	Functions
1		Function keys	3		Add key / needle up and down bit composite key
2		Save button	4		Minus key / soft-start composite key



3.2 Monitor mode

Standby, press the “S” key for 2 seconds into the monitoring status, press ▲ ▼ to change monitor serial number, monitor value can not be modified. Specific display content:

show frame	Item Name	unit		show frame umbers	Item Name	unit
SPD	speed	(*10) rpm		DJ	Angle	limit
CUR	Current	0.01A		VER	version	/
UDC	Voltage	V		PED	Pedal value	
ID	Type code	C01				

Press the S key to enter to a specific value, press P to exit and return to the standby state.

4 Operation Mode

4.1 Parameter Mode

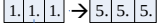
Setup Parameter: the parameters are divided into general parameters and advanced parameters; password is needed for entering into advanced parameters. Do not start the system in parameter mode (except for P23 parameters)!! Keys are locked when motor runs.

Press “P” shortly for 1s to enter into general parameters mode, P01 will be shown: 
Press “▲▼” to change serial numbers of parameters. After pressing Key S, corresponding parameters will be shown, and press “▲▼” to change: 
a) After save by pressing “S”, press “P ” to exit .
b) If you press “P ” directly, exit with parameters saved.

4.2 Advanced Parameters Mode

Password is needed to access to advanced parameters. Long press “P” for more than 3s to enter into password input interface, and the system displays:  which flickers from the top digit, Press “▲▼” to change with the range of 0~F, Press “S” to switch the position. if password is correct, advanced parameter serial number  will be displayed.

If the password is incorrect, return to 000 (flickering from the top digit as before) Press “P” again to exit. Defailure password is 111. A all-purpose password shall be set in the software. After entry into advanced parameters, the general parameters can also be displayed. Reset Password: at the same time of powering on, press  to enter into password resetting interface. The system will request to input the old password, and the screen will firstly display :

- 1) Flickering from the top digit, press “S” to switch the position, and press “▲▼” to change, press “P” to confirm input.
- 2) If the password is correct (assumed to be 111), then the decimal point will be on, and the top digit will started to flicker to set new password (assumed to be 555) [range of value for each digit “0~9” “A~Z”]. Press “P” to enter into confirmation screen after setting; press “▲▼” and select “YES”, press “S” to save, “oFF” will be displayed. It is prompted to power off, and press “P” to exit 
- 3) : If the password is incorrect, return to display of 000. After mistaken input for 3 times, “oFF” will be displayed to prompt to power off.

4.3 Motor Angle Test Mode

Press “S” to power on, enter into motor angle test mode, and the system will display: 
Press “P+▼” to start testing. The motor angle will be displayed after test is finished. Exiting from this mode can be achieved only by powering off.

Note: the above the display value for reference only, specific to the actual data shall prevail.

5. Error Code Table

Fault display	Fault content	Check the project		Fault display	Fault content	Check the project
E1	Overcurrent of hardware	Check if it is well earthed Whether the damage to the device driver		E12	Motor overload	Check the sewing machine is not jammed. Actual operating excessively frequent acceleration and deceleration
E2	Whether the damage to the device driver	Check if it is well earthed Current detection loop system is working properly		E13	EEPROM error	seek technical support
E3	System voltage is too high	System into line voltage is too high		E14	Current detection of non-normal	seek technical support
E4	System voltage is too low	System into line voltage is too low		E15	Pedal zero point exceeds the range	Pedal zero point exceeds the setting range
E5	High voltage runtime	System into line voltage is too high		E16	OZ circuit of non-normal	seek technical support
E6	Needle stop signal failure	Check if the needle connector is loose		E17	Motor reverse	Check motor phase sequence and signal lines
E7	Motor HALL Signal failure	Check the motor connector for poor connection.		E18	Motor angle test failure	Re-conform the motor angle
E8	Locked rotor failure of motor	Check if the motor wire is well connected, and if it is overloaded		E19	Safety switch fault	Put down the head or check turned up switch.
E9	Over-speed failure	Check if the motor wire connection is correct		E21	Motor model code is empty	Re-conform model
E10	Low voltage runtime	Check if it is well earthed. Current detection loop system is working properly		E22	Motor model code is out of range	Re-conform model
E11	HALLA signal loss	Check the motor signal cord		E25	Z encoder signal fault	Motor plug is good contact;

Method of removing inductive pedal fault

The fault reasons: because the product of long-term use of pedal will have a small probability of occurrence of zero inaccurate, resulting in poor operation problems; the following specific fault phenomenon and the elimination way:

一、 fault phenomenon:

- The front pedal speed too sensitive;
- The front pedal is not up to the most high;
- Backward step supreme needle;
- Run stop after low speed, machine needles, can't stop.

二、 Troubleshooting method:

If appear above the fault phenomenon can be electronically controlled zero correction, the specific operation method:

According to the “upper and lower needle stop button” start, “PDL” is displayed at the operation box, press “P + soft start button” start zero calibration success will display the current zero value, such as “-5”; if the pedal and control do not match is displayed “E15”, you need to replace the pedal test; such as zero again after correction can not solve, can also refer to the following method to adjust:

- If the front pedal speed too sensitive phenomenon, can be P25 parameter adjustment is small;
- If the front pedal is not up to the most high speed phenomenon, can be P28 parameter adjustment is small;
- If there is a backward step supreme needle phenomenon, can be large P29 parameter tuning;
- If after stopping operation, machine needle slow walk, stop the phenomenon, can be large P25 parameter tuning.

三、 Electric control parameter adjustment procedure:

Enter the advanced parameters, need to enter the password. Long press P key for 3 seconds or more, into the password input interface, the system display:  from the most high start flashing, press “next” button to change, the range of 0~F, press the S key to switch position, press the P key to check after the input password, if the password is correct, advanced display parameter sequence number:  , then the parameters to the corresponding parameters, press the S button to confirm, then press “next” button to modify the parameter values, the modified confirm by pressing the S key, and then press the P key to return to the sewing interface.

5. Accessorya

No.	Product name	Amount	Product specification	Confirm	Remarks
1	Electric control	1			
2	Power cord	1			
3	pedal	1	PL-302		
4	Ball section	1			
5	screw	3	M4×20		Inner six angle screw
6	screw	3	M5×25		Outside six angle screw
7	The instructions	1			