

JK-EE5 Simple Overlock Machine Controller

Operation Manual

Version: V0.2 (English Translation)

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Display and Operation Interface



No.	Icon	Name	Description
1		Up Key	Used for quick setting of maximum speed and adjusting parameters.
2		Down Key	Used for parameter initialization, entering the settings menu, and quick adjustment of maximum speed.
3		LED Key	Shortcut key to adjust the brightness of the machine head light.

Note: The keys cannot be operated while the machine is running. The machine cannot be started within 500ms after a key operation.

Standby Interface

In the standby interface, the first digit of the display shows "P". The second digit indicates the currently set needle stop position: needle up, needle down, or needle down without automatic needle up on heel-back pedal action. See Figure 1 for display examples.

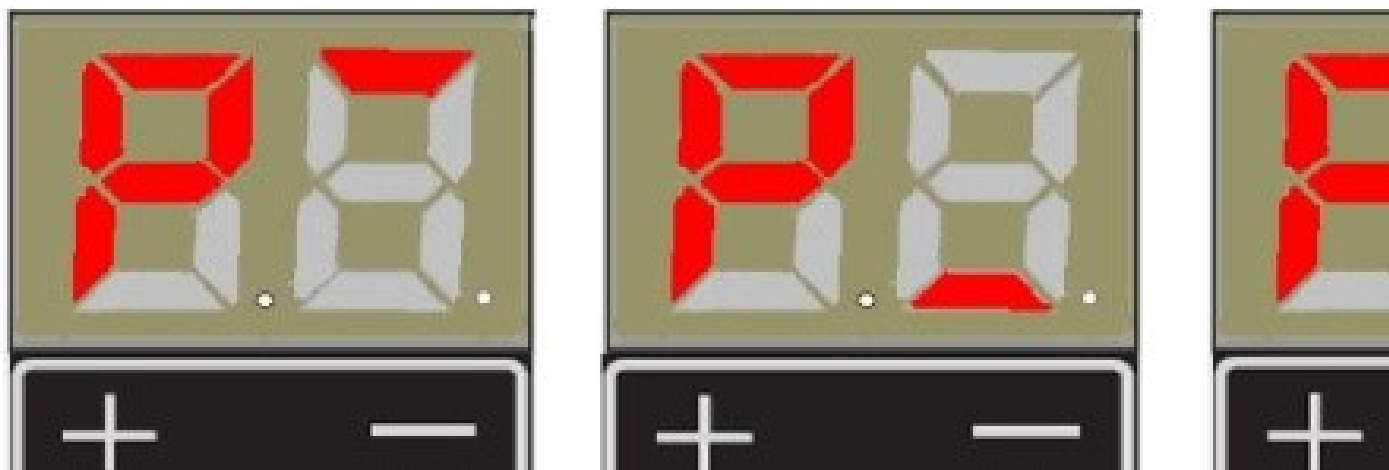


Figure 1: Display interface for needle up, needle down, and needle down without auto-up function.

Quick Speed Setting

In the standby interface, short press the **Up Key** () to increase the speed by 100 RPM (value increases by 1). Short press the **Down Key** () to decrease the speed by 100 RPM (value decreases by 1). Long press the **Up Key** () or **Down Key** () for rapid increase or decrease. The setting is saved automatically.

Quick LED Brightness Setting

Short press the **LED Key** () to enter the LED brightness setting interface. The new brightness value is saved automatically. The system will automatically exit to the standby interface if there is no key operation for 2 seconds.

Quick Needle Stop Position Setting

In the standby interface, long press the **Up Key** () to cycle through the needle stop position settings (needle up, needle down, etc.). The setting is saved automatically.

Parameter Settings

In the standby interface, long-press the combination of **Up** () and **Down** () keys (for approximately 3 seconds) to enter the parameter setting interface. The first digital tube displays "F" and the second digital tube is

blank (hereinafter referred to as the F interface, one of the setting interfaces), as shown in Figure

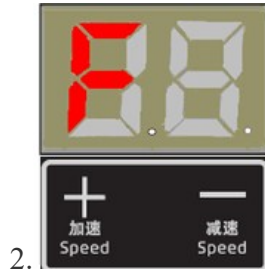


Figure 2: F Interface Display



After entering the parameter setting interface, short-press the Up (加速 Speed) key to switch the parameter serial



number. Press the Down (减速 Speed) key to display the corresponding parameter value, and press the Up (加速 Speed) key



again to modify the parameter value. If the parameter is modified, short-press the Up (加速 Speed) key to save; the display will show "OK" (as shown in Figure 3) and return to the current serial number display interface. If no parameter modification is made, it will directly return to the current serial number display interface. The motor operation in the setting interface will exit to the standby interface. The serial numbers in the F interface cycle according to the following table:

Serial No.	Parameter Definition	Setting Range	Factory Default	Remarks
k	Head Light Brightness Adjustment	0 - 5	3	0: Off; 1~4: Brightness levels; 5: Max brightness
L	Sewing Speed Limit	05 - 55	50	Unit: 100 RPM (e.g., 50 = 5000 RPM)
M	Needle Stop Position Switch	0 - 1	1	0: Off; 1: On
H	Sleep Timer	0 - 6	3	Unit: 10 minutes. Set to 0 to disable sleep function.
V	Speed Display Enable	0 - 1	0	0: Off; 1: On
R	Undervoltage Alarm Value	0 - 1	0	0: Off; 1: On
Y	Overvoltage Alarm Value	0 - 1	1	0: Off; 1: On
D	Power-on Needle Up Position Enable	0 - 1	0	0: Does not find up position on power-on; 1: Finds up position on power-on
SN	Serial Number View	Not settable	-	-
W	Speed Regulator Type Selection	0 - 1	1	0: Original regulator (Aluminum case); 1: Lockstitch Bosit regulator
G	Maximum Speed Position	38 - 50	W=0: 41; W=1: 42	Unit: 0.1V
I	Initial Position	10 - 20	W=0: 14; W=1: 17	Unit: 0.1V
J	Monitoring Item View	Not settable	-	Entry point for monitoring mode.

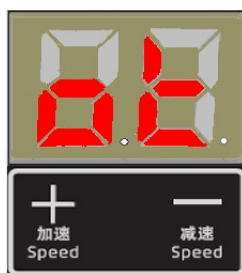


Figure 3: "oK" Confirmation Display

Restore Factory Settings



In the standby interface, long press the **Down Key** () for approximately 3 seconds. All parameters will be restored to their factory default values, and the digital display will show "oK".

Durability Test Mode Parameters



From the F interface, long press the **Up** () key for 3 seconds to enter the Durability Test Mode. The first digit of the display will show "T" (hereinafter referred to as the "T interface"). In this interface, short press the



Up () to select and set the durability parameters as described in the table below. To start the durability test,



short press the **Down Key** () to exit the test and return to normal sewing mode, short press the **Up**



() key again. The system will exit to the standby interface if the motor is operated while setting parameters.

Parameter	Range	Default	Description
Durability Mode Run Time	1 - 9	3	Unit: seconds (s)
Durability Mode Stop Time	1 - 9	3	Unit: seconds (s)

One-Key Error Clearing

When a system error occurs and an error code is displayed, press **Up** () key to re-check for the error. If the fault no longer exists, the alarm will be cleared. If the fault persists, the alarm will continue. (This function is limited to E4, E5, and E6 errors).

For E5 Error (Positioner signal abnormal): If an E5 error occurs, long press the **Down Key** () to disable the needle stop position function and clear the alarm. If the alarm is not cleared, the error code will remain on the display until the fault is resolved. For a detailed list of error codes, refer to the Error Code Table.

Monitoring Items Description

From the F interface, long press the **Down Key** () for 3 seconds to enter the Monitoring Mode. The first digit of the display will show "J" (hereinafter referred to as the "J interface"). In this interface, short press the **Up** () key to switch between monitoring items. At the desired item, short press the **Down Key** () to view its value.

Item No.	Function Parameter	Remarks
J1	Real-time Speed	Unit: x100 r/min
J2	Real-time Power	Unit: x10 W
J3	Real-time AC Input Voltage	Unit: x100 V
J4	Historical Min/Max Voltage	After entering to view the value, short press the Down Key () to toggle between historical minimum and maximum voltage.
J5	Historical Fault Code View	After entering to view the value, short press the Down Key () to cycle through the 5 most recent historical fault codes.
J6	Cumulative Run Time	Unit: hours
J9	Program Sub-version Number	-
JA	Speed Regulator Voltage Monitoring	Unit: 0.1 V
JB	Motor Hall Sensor Self-test Display	The display shows the status of U, V, W Hall sensor signals in sequence.
JC	Needle Stop Hall Sensor Self-test Display	The display shows the status of the needle up and needle down Hall sensor signals in sequence.

Digital Tube Display Guide

Numeric Part:

Actual Value	0	1	2	3	4	5	6	7	8	9
Digital Tube Display										

English Letter Part:

English Letters	A	B	C	D	E	F	G	H	I	J
Digital Tube Display										
English Letters	K	L	M	N	O	P	Q	R	S	T
Digital Tube Display										
English Letters	U	V	W	X	Y	Z				
Digital Tube Display										

Error Code Table

Error Code	Content	Solution / Countermeasure
E1	Motor Stall	Turn the handwheel to check if the machine head is stuck or difficult to turn. Check if the motor connector is loose or detached. Check if the material being sewn is too thick, causing insufficient motor torque. Check if the machine requires lubrication.
E2	Controller Anomaly	Turn the power off and on again. If the alarm persists, check if the motor load is too high (reduce the load and restart) or if the sewing material is too thick.
E3	Parameter Save Error	Turn off the power and wait a moment before turning it back on.

		Perform a factory reset (long press the Down Key ( Speed) for approx. 3s). If the issue is not resolved after restarting or resetting, contact your dealer.
E4	Motor Hall Sensor Signal Error	Check if the motor encoder plug is securely connected. Check for any broken wires or deformed/retracted pins in the encoder signal line.
E5	Positioner Signal Error	Turn the handwheel. If the alarm doesn't clear, power cycle the machine. If it still persists, check if the encoder/positioner plug is securely connected. Check for abnormalities in the motor positioner Hall sensor. (If the positioner is damaged or not needed, long press the Down Key ( Speed) for approx. 3s after the E5 error appears to disable the needle stop function).
E6	Speed Regulator Error	Check if the speed regulator (foot pedal) is plugged in. Check if the regulator's plug/pins are loose or detached. If the alarm cannot be cleared, replace the speed regulator.
EJ	Current Detection Circuit Fault	Check if the circuit board is clean. Check if the power supply voltage is normal. Wait for the power to be restarted/reset (carefully inspect all functions of the power board).
EA	Hardware Overcurrent	Turn the power off and on again. Check if the supply voltage is normal. Try restoring factory settings.
Eb	System Overvoltage	Immediately cut off the power and check if the supply voltage is too high. If so, adjust the supply voltage to the rated voltage (Rated Voltage: 220V) before restarting.
EC	System Undervoltage	Immediately cut off the power and check if the supply voltage is too low. If so, adjust the supply voltage to the rated voltage (Rated Voltage: 220V) before restarting.

Revision History

Modification Date	Modified By	Modification Content	Previous Version	Current Version
2025-10-13	Zhang Panshuai	New document creation	-	V0.1