ENGLISH

L-1C
INSTRUCTION MANUAL
(Electrical)

● Preface

Thank you for purchasing this product, In order to make use of product better, Before installing and testing, please read the operating instructions and the sewing equipment specification carefully, to use correctly, and be installed and tested by professionals.

Note:

This product is only applicable to the specified range of sewing equipments, please do not use for other purposes.

Our company has the right of final interpretation of this manual.

If there is any doubt when using product or any comments or suggestions of our products and services, please feel free to contact us!

Due to upgrade products, features and specifications are subject to change without notice.

The usage of the operating instructions:

The operating instructions provide guidance information based on user's requirements.

The information involves equipments and other usage occasions, transportation, installation, use and maintenance.

The operating instructions are intended for users and technical staff.

●Safety Instructions

(1) Make sure that the controller switch button is off before plugging in power.

(2) Make sure that all the motor connector cord is plugged in before the switch button turn on, otherwise it will be an error.

(3) Connecting plug is one to one, be sure to match each other when make connection. Do not be excessive force when inserting to avoid damage to the system.

(4) The motor lines do not be pressed or excessive distortion, to avoid damage to the signal line connectors.

(5) Do not disassemble the controller without professionals, to avoid accidents.

(6) Power terminals should be installed by specially assigned person. Connect the wires of the same function together.
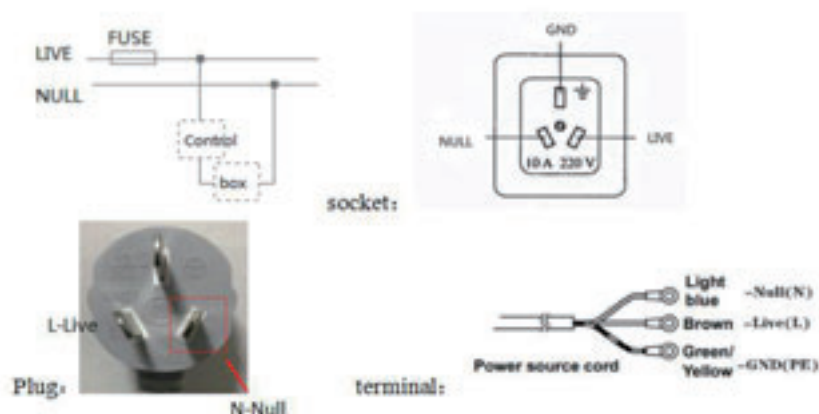
● Control box technical index

Controller type	L-1C-220V	L-1C-110V
Voltage	AC 220V ± 10% 50/60HZ	AC 110V ± 10% 50/60HZ
Rated power	550W	550W
Motor torque	≤ 3 N·M	≤ 3 N·M
Motor speed	200rpm ~ 4500rpm	200rpm ~ 4500rpm
Trimmer	YES	YES
Over current, overload protection	YES	YES

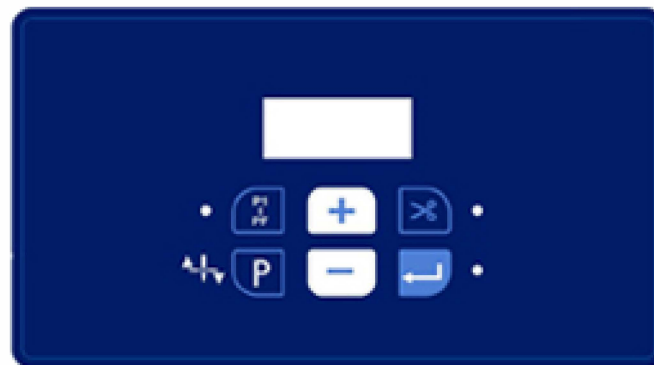## ● Port definition

①   Pedal switch Socket
②   LED light outlet
(③④Trimming   electromagnet connection.）

※ Please follow the interface definitions and terminals Color connection.
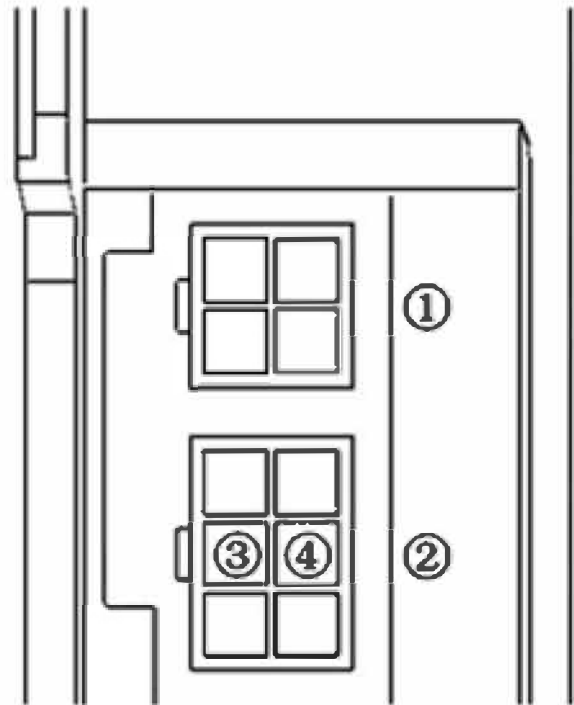
● Operation panel description

Interface	Key function
Interface 1： Main interface	**P** : function 1：Short press to switch the needle stop position function 2：Press with ' **+** 'to enter Parameter interface function 3：Press with ' **—** 'to enter Segment number setting
	function 4：Press with '⏎'to enter Adjust needle position interface ⏎ : function 1：Short press to query version number, and press any key to exit after display

	function 2: Press and hold for a long time to display the pedal voltage value, and then press again to exit
	+ , **−** :: Acceleration and deceleration
	✂ : Thread trimming on and off
	P1/PF : Mode switching between free sewing and fixed section sewing
Interface 2: Parameter number adjustment interface	**P** : Return to the main interface
	↵ : Short press to enter interface 3（Press '↵' key to restore the factory settings after parameter No. 00）
	+ , **−** : Modify parameter number
Interface 3: Parameter value adjustment interface	**P** : Return to superior interface
	↵ : Save parameter values
	+ , **−** :: Modify parameter value
Interface 4: P1/PF Segment number setting interface	**P** : Return to the main interface
	↵ : Short press to enter interface
	+ , **−** :: Modify segment number

● **Error code and parameter**

List 1: Error code

Error code.	Meaning	Possible problem
Er-02	The pedal is not in neutral state when the machine is started	Make sure the pedal is in good contact
Er-04	Continuous low speed and high current output of motor	Check whether the motor is installed well
Er-05	Motor drive circuit alarm	Check the control system circuit
Er-06	Power on self test failed	Check whether the motor is installed well
Er-08	Safety switch dumping	Place the machine in position
Er-09	High current operation for 4 seconds	Check whether the motor is installed well

List 2: Parameter

No.	Name	Parameter range	Leave-factory number	Function
P-01	Pedal curve	1~100	30	Pedal curve correction
P-02	Needle position	0/1	1	1: Down 0: Up
P-06	Slow start speed	200~2800	1800	Slow start speed
P-07	Number of slow start stitches	1~99	2	Number of slow start stitches
P-08	fixed section sewing speed	200~4500	3000	fixed section sewing speed
P-13	Stitch speed	200~800	300	Stitch speed
P-20	Automatic triggering	0/1	0	0: OFF 1: ON
P-21	Slow start	0/1	0	0: OFF 1: ON
P-25	Wire cut	0/1	1	0: OFF 1: ON
P-32	Stitch mode	0/1/2	2	0: Half circle 1: 1 circle 2: Continuity
P-34	Full rear pedal voltage value	0~5000	300	Trimming voltage
P-35	Half rear pedal voltage value	0~5000	800	Half step back voltage
P-36	Stop voltage value	0~5000	1250	Stop voltage value
P-37	Starting voltage value	0~5000	1550	Starting voltage value
P-38	Low speed voltage value	0~5000	1800	Low speed voltage value
P-39	Pedal maximum voltage	0~5000	4200	Pedal maximum voltage
P-40	Cut times	0~9999	0	Cut times

P-43	Angle of back lifting needle after thread cutting	0~320	0	Angle of back lifting needle after thread cutting
P-52	Minimum position	145	0~360	Lowest position of take-up bar
P-55	Up needle position	0~2880	2740	Up needle position
P-56	Down needle position	0~2880	1320	Down needle position
P-57	Cutting angle	0~359	18	Thread trimming electromagnet closing angle
P-58	Angle of thread cutting and force application	0~359	105	Angle of thread cutting and force application
P-59	Thread cutting angle	0~359	155	Thread cutting angle
P-60	Cut speed	150~500	300	Cut speed
P-76	Find up	0~2	0	0:optimal 1:off 2:ordinary
P-77	Auto run	0/1	0	0: OFF 1: ON
P-78	Run time	0~999	20	Run time
P-79	Stop time	0~999	10	Stop time
P-83	Top speed	200~4500	4000	Used to limit speed
P-84	Thread cutting force	0~100	60	Thread cutting force
P-85	Brake force after thread trimming	0~999	0	Brake force after thread trimming
P-86	Brake force before thread trimming	0~999	20	Brake force before thread trimming
P-92	Position control parameters (ks)	0~40	26	Algorithm parameter
P-93	Position control parameters (ka)	0~4028	4000	Algorithm parameter
P-94	Position control parameters (kb)	0~4028	1000	Algorithm parameter
P-95	Position control parameters (kt)	0~999	150	Algorithm parameter
P-96	Dumping detection	0/1	1	0: OFF 1: ON
P-97	High current detection	0~999	200	200 means 1A