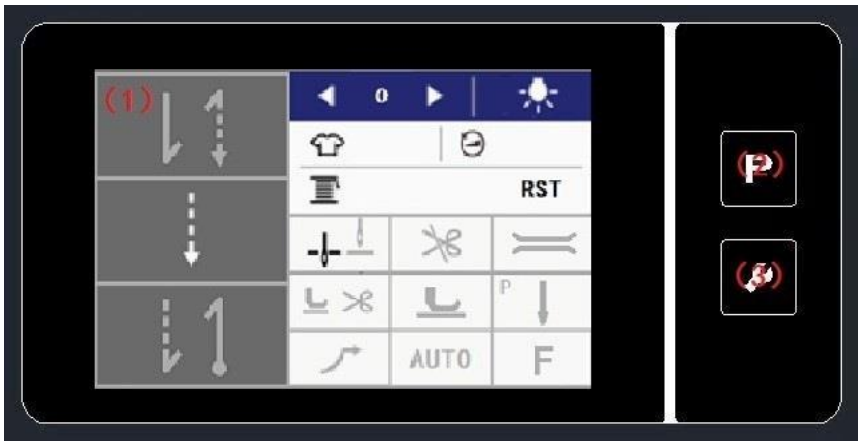
User manual

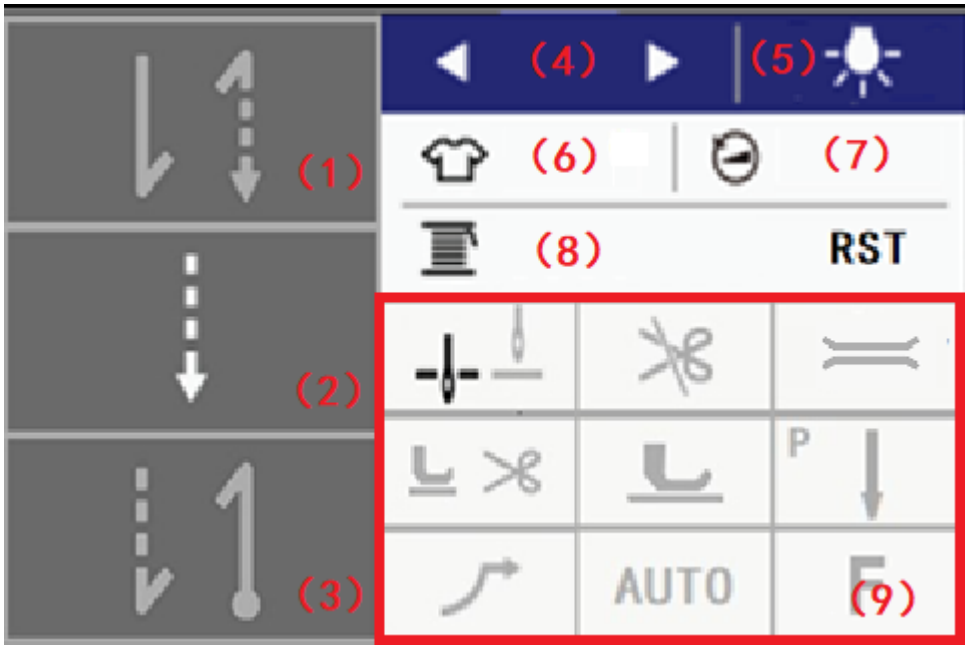
VERSION:1.05

1. Panel description



1	Main page
2	Software update button
3	Service button

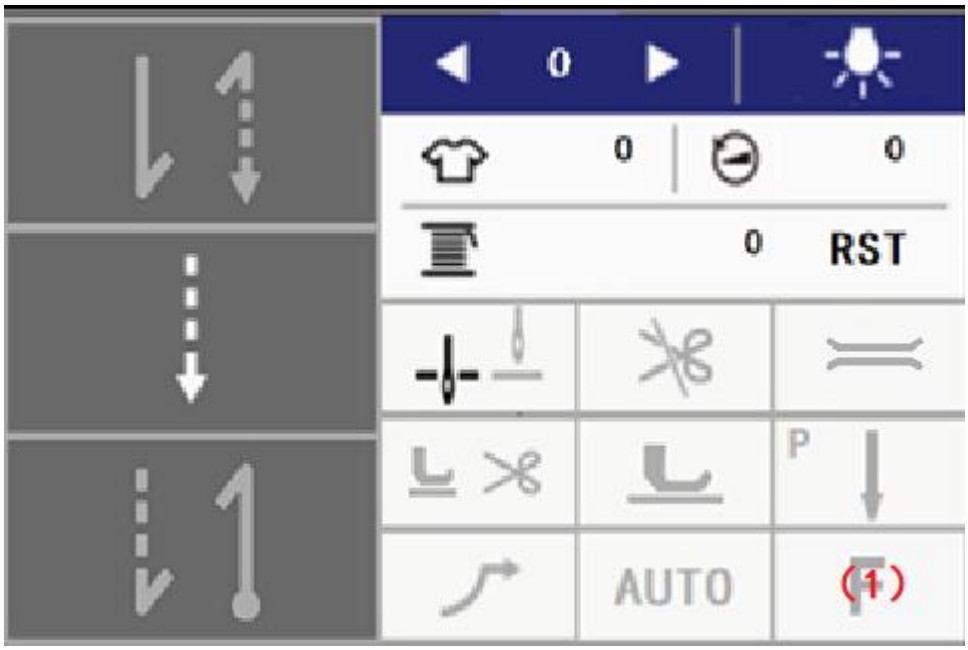
1.1Main page



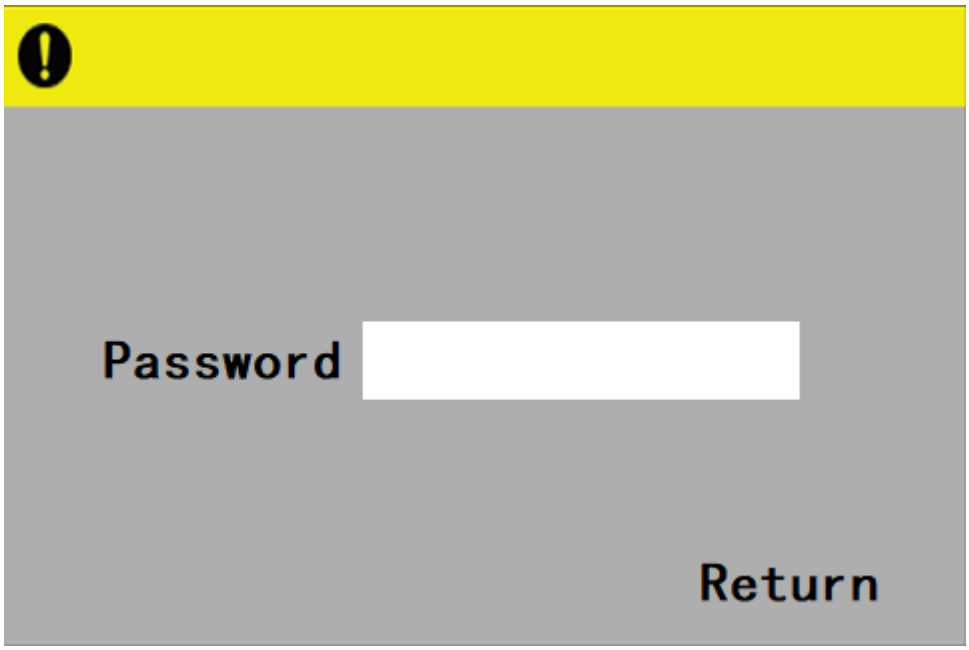
1	Start bartack button	Set start bartack parameter
2	Main sewing button	Set Main sewing parameter
3	End bartack button	Set end bartack parameter

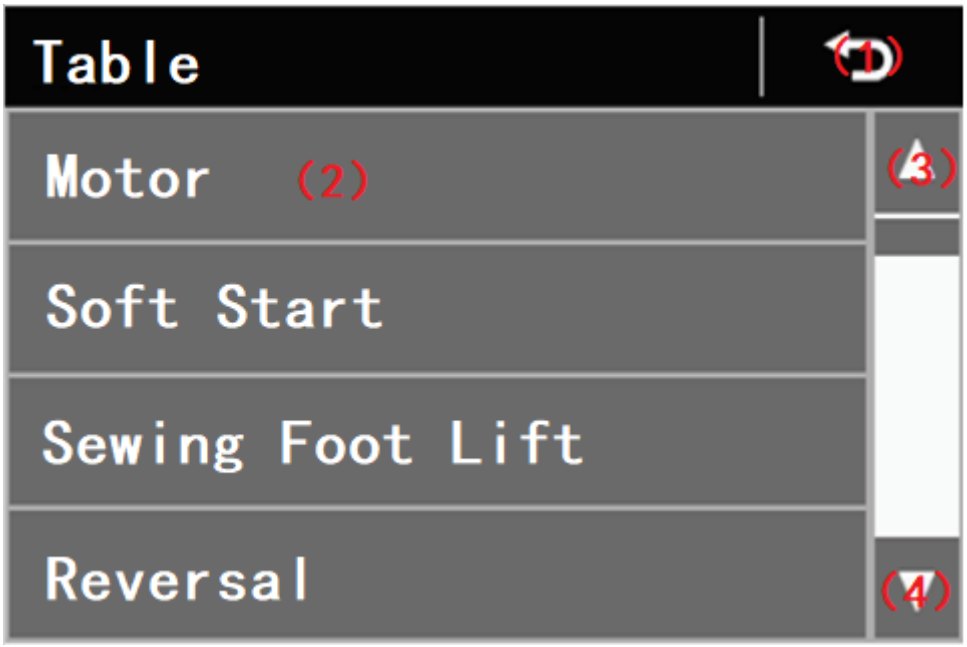
4	Para group button	Set current para group
5	LED brightness adjustment	Set led brightness
6	Sewing counter	Show current output
7	Motor speed	Show current motor speed
8	Bobbin stitch counter	Show bobbin stitch counter
9	Omnibox	Set the corresponding function

1.2Parament editing

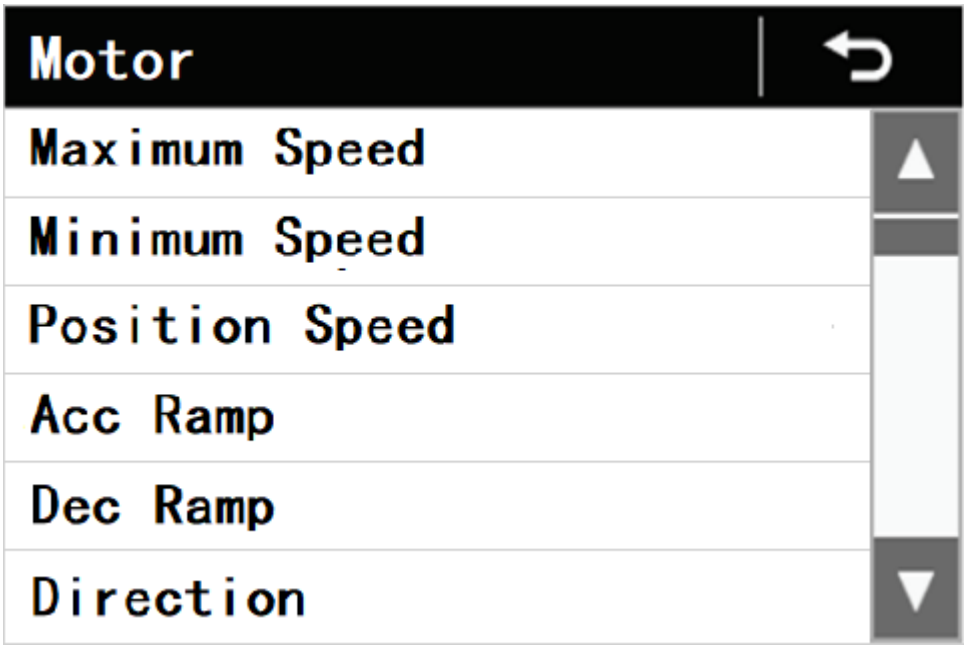


Click the F function key, and then enter the password 3112,you will enter parameter table.





1	Back to main page
2	Enter the motor parameter edit page
3	Go back to the last page
4	Go to the next page



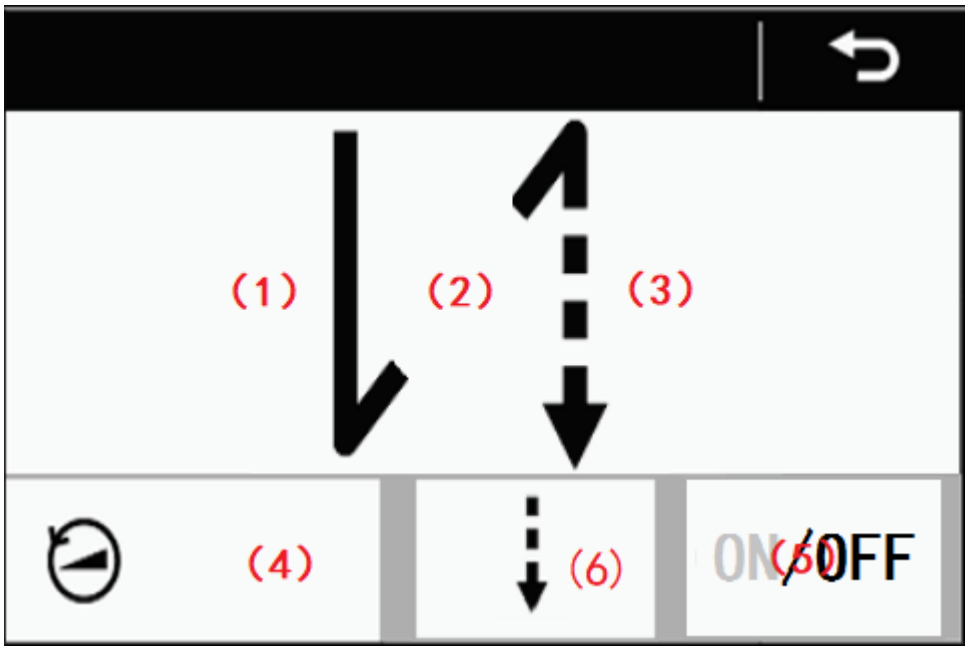
Click to modify parameters.

2 Sewing parameter setting

2.1 Composition of sewing section

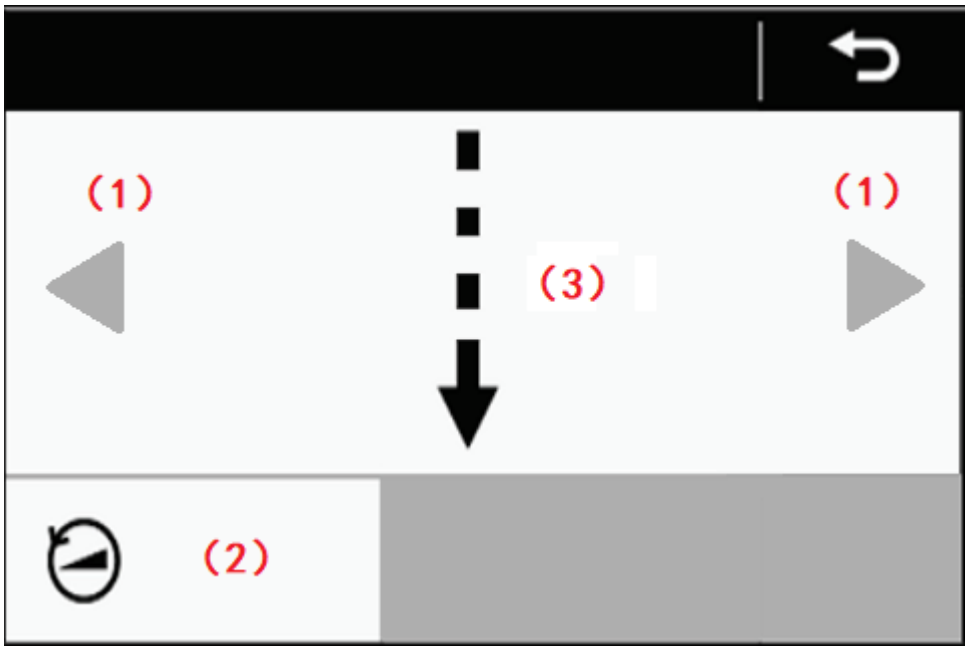
Start bartack
Main （1~12 Segmented）
End bartack
Accessibility

2.2 Start bartack



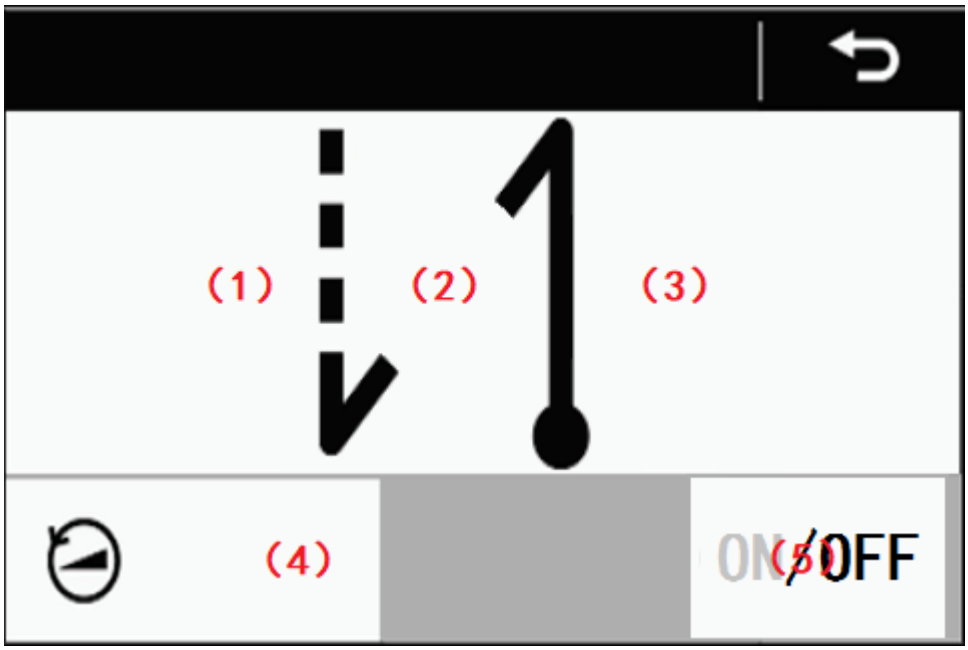
1	Catch backtack forward	1~99
2	Catch backtack backward	1~99
3	Page num	1~10
4	Speed	300~3000n/min
5	Enable	0：enable；1：disable
6	Mode of end bartack	:Sewing continues after end : Machine stop and must be restarted using the pedal END : Thread cutting after after start bartack

2.3 Main sewing



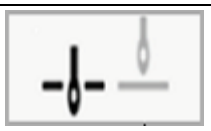
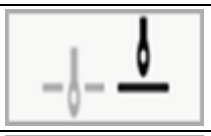
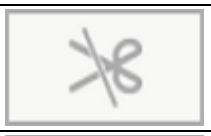
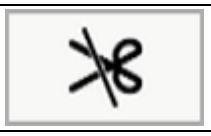
	Sewing type	Free, Fixed stitch
1	Sewing type switch button	0~1
2	Speed	180~3000n/min
3	Stitch	1~99

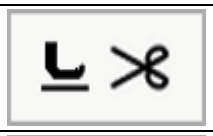
2.4 End bartack



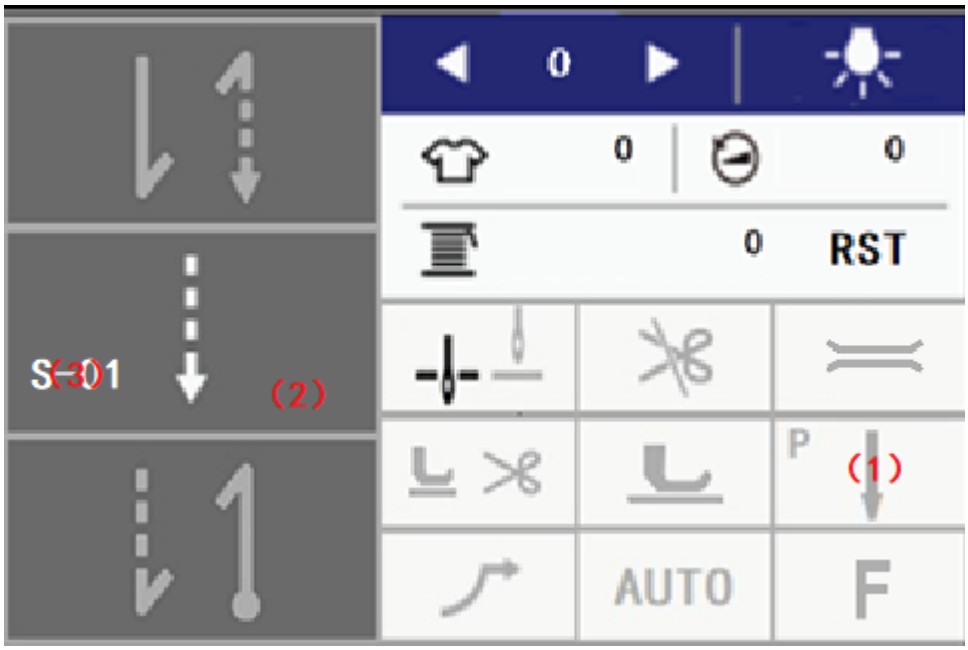
1	Catch backtack forward	1~99
2	Catch backtack backward	1~99
3	Page num	1~10
4	Speed	300~3000n/min
5	Enable	0：enable；1：disable

2.5 Accessibility

Needle Stop position		Needle in low position
		Thread lever at top dead center
Cut		Off
		On
Clamp		Off
		On
Soft start		Off
		On
Multi-segment sewing		Off
		On
Auto		Fixed stitch auto off
		Fixed stitch auto on
		End sewing foot auto lift off

End foot lift		End sewing foot auto lift on
Hold foot lift		Hold sewing foot auto lift off
		Hold sewing foot auto lift on

2.6 Multi-segment sewing

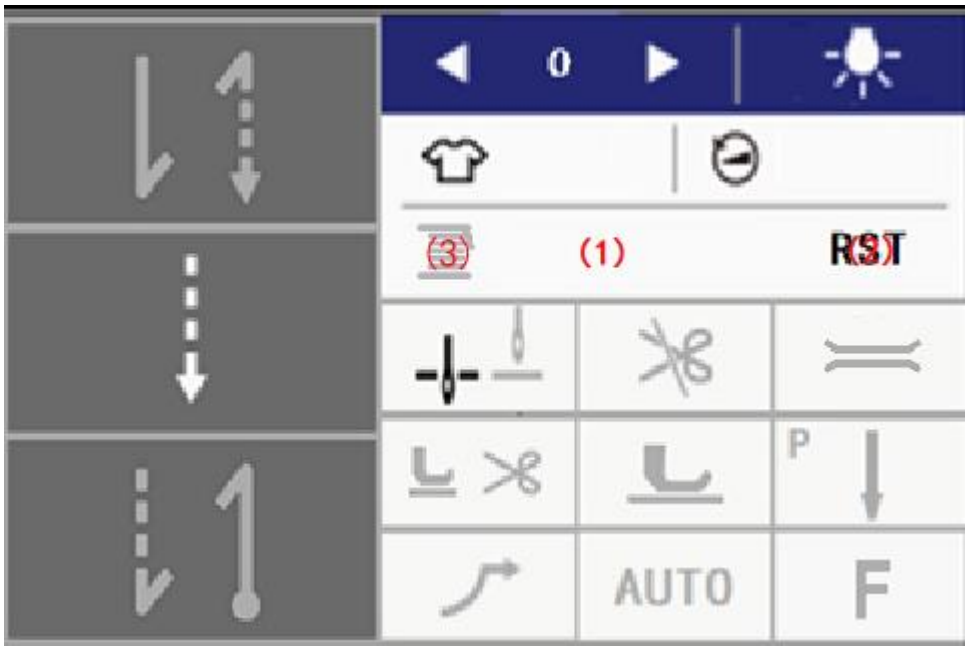


1	Enable or disable multi-segment sewing fun
2	Enter multi-segment sewing edit page
3	Show current segment

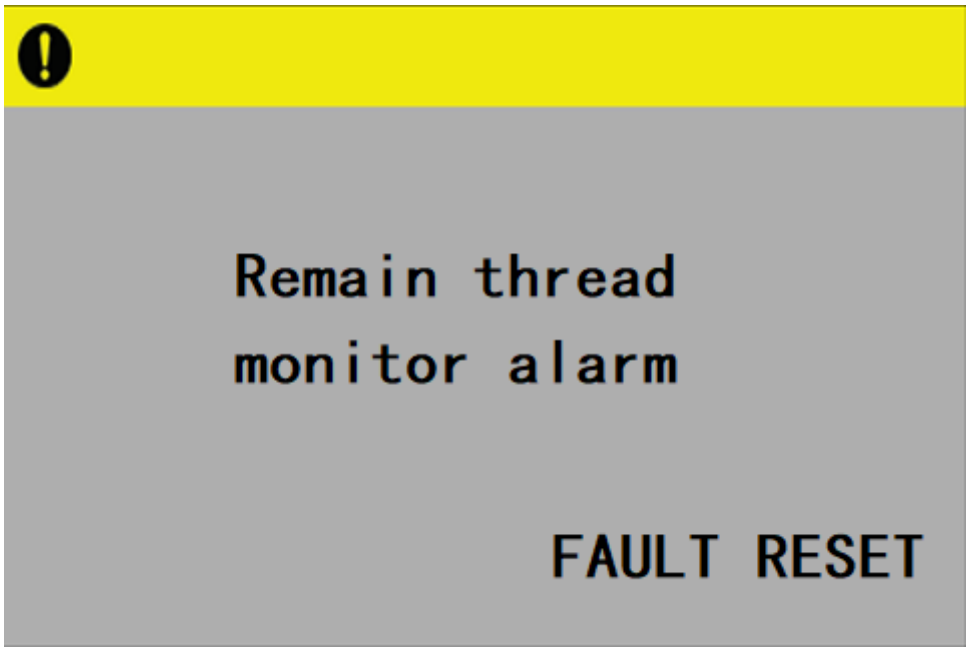
1	Enter S-01 segment edit page
2	Add segment
3	Delete segment

3 Expand function

3.1 Bobbin stitch counter

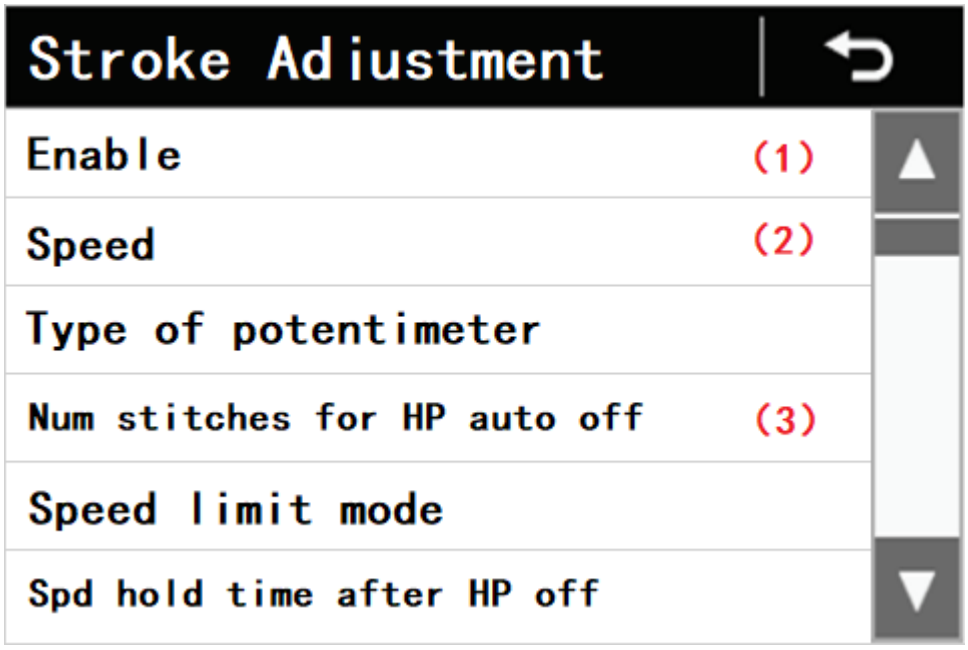


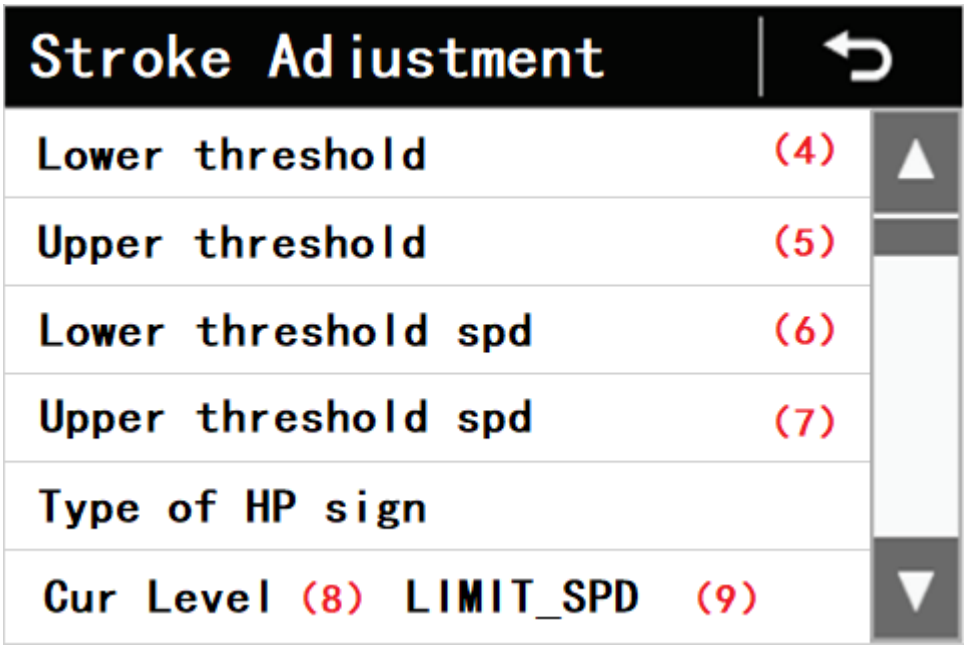
1	Show current Bobbin stitch counter value
2	Reset current Bobbin stitch counter value
3	: Bobbin stitch counter off A: Bobbin stitch counter A enable B: Bobbin stitch counter B enable C: Bobbin stitch counter C enable

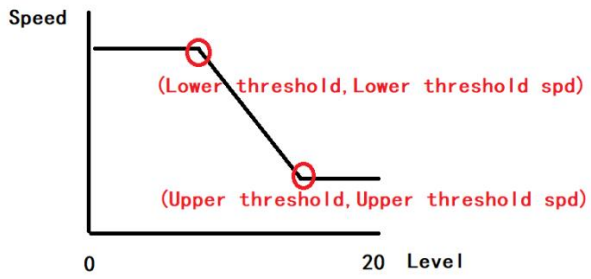


If Bobbin stitch counter equal 0,the The machine stops and alarm, you need replace the bobbin, then Click on the fault reset button.

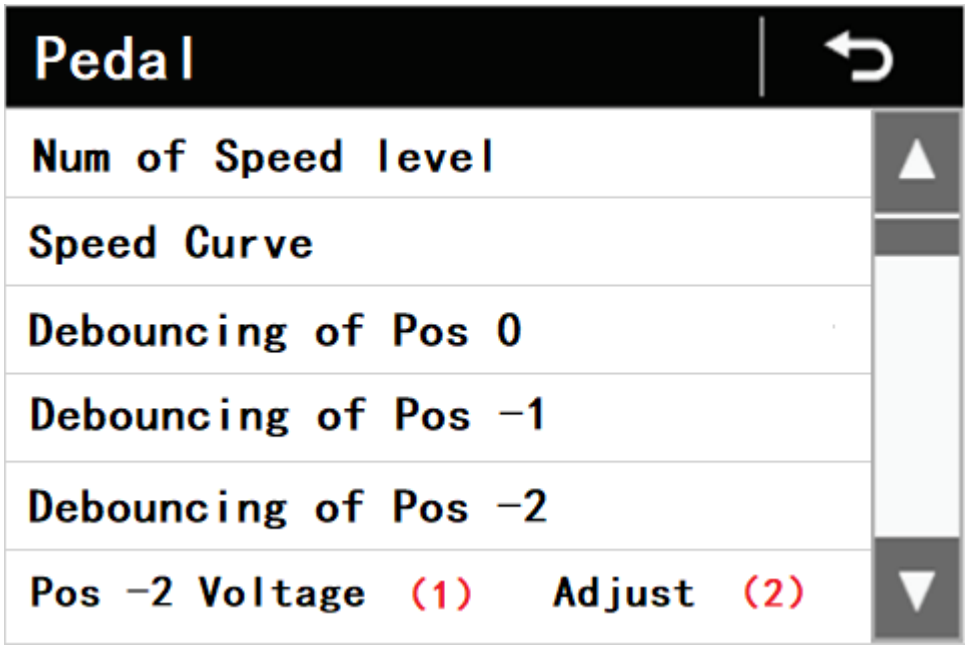
3.2 Stroke Adjustment

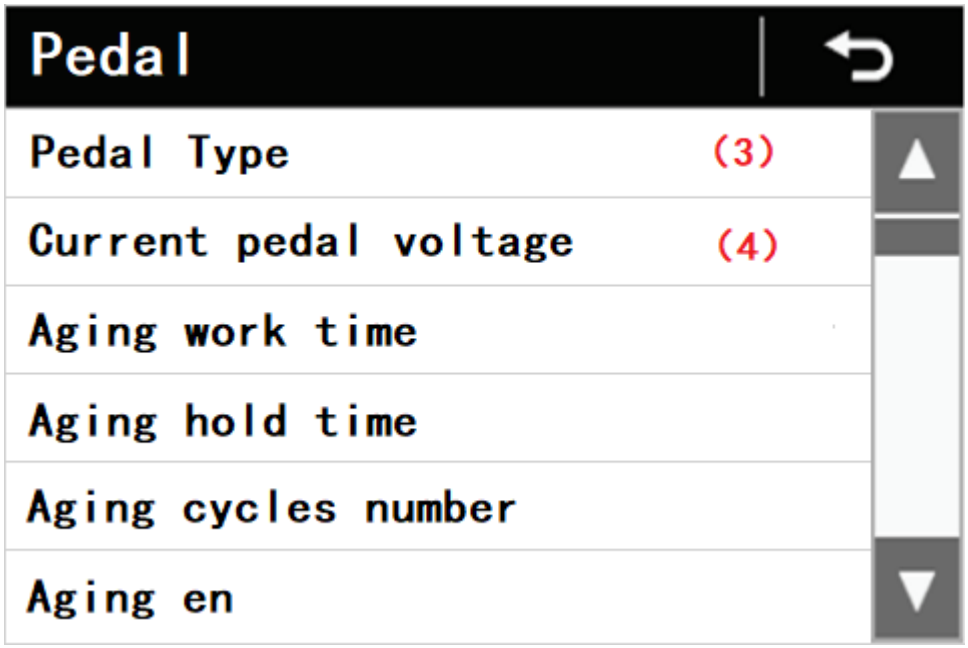




1	0:on stroke adjustment 1:off stroke adjustment
2	stroke adjustment entry speed, if cur speed > stroke adjustment entry speed, The motor slows down to stroke adjustment entry speed, and then turns on the stroke adjustment cylinder
3	0:manual off stroke adjustment cylinder. >0:after set stitches,the stroke adjustment cylinder auto off.
	 1.When current level is less than lower threshold(4),the max speed = lower threshold speed(6). 2.When current level is greater than Upper threshold(5),the max speed = Upper threshold speed(7). 3.when current level is greater than lower threshold(4)and less than Upper threshold(5), The max speed changes linearly according to the curve in the figure
8	When you turn the stroke adjustment knob, the current level changes in real time
9	Cur max speed.

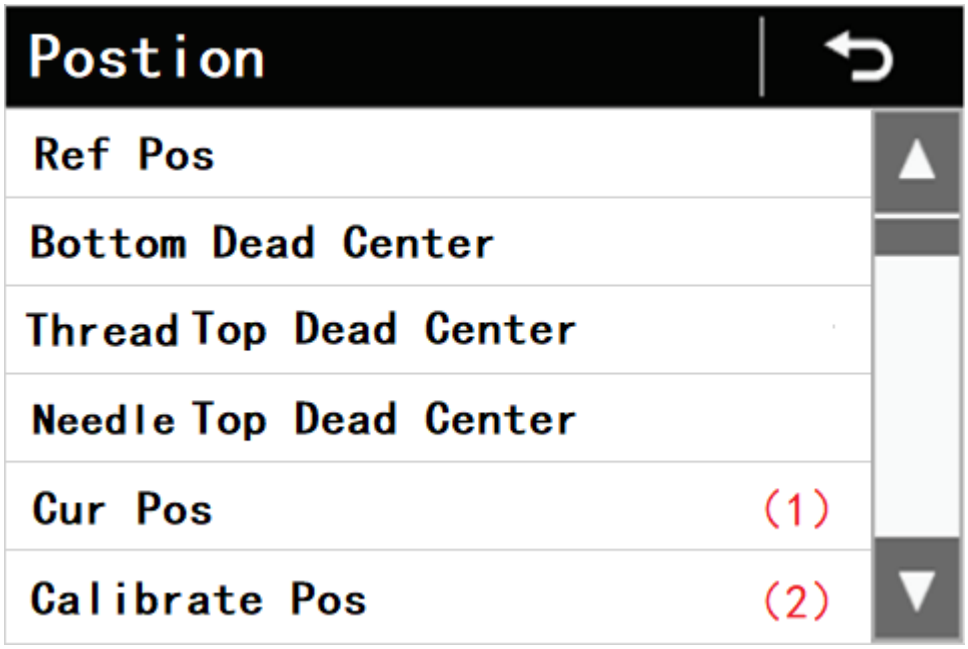
3.3 Pedal





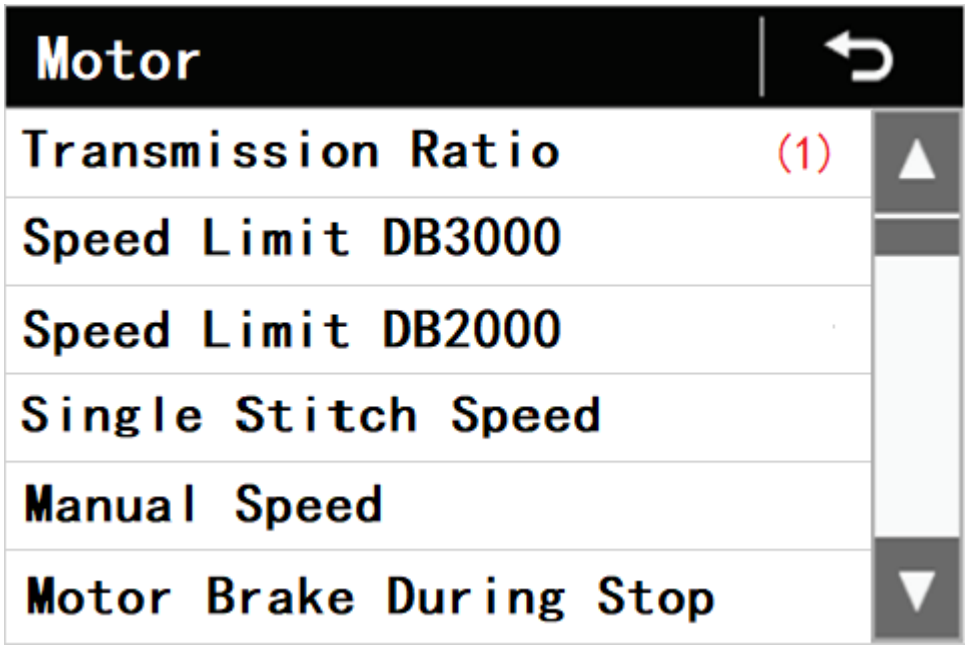
1	-2 position(cut trig pos) trigger voltage(1), If the current pedal voltage(3) is lower than this value, the wire trimming will be triggered.
2	-2 position(cut trig pos) trigger voltage adjustment value(2), Range -30~8.
3	0: Analog pedal 1: Digital pedal
4	Current pedal voltage disp.

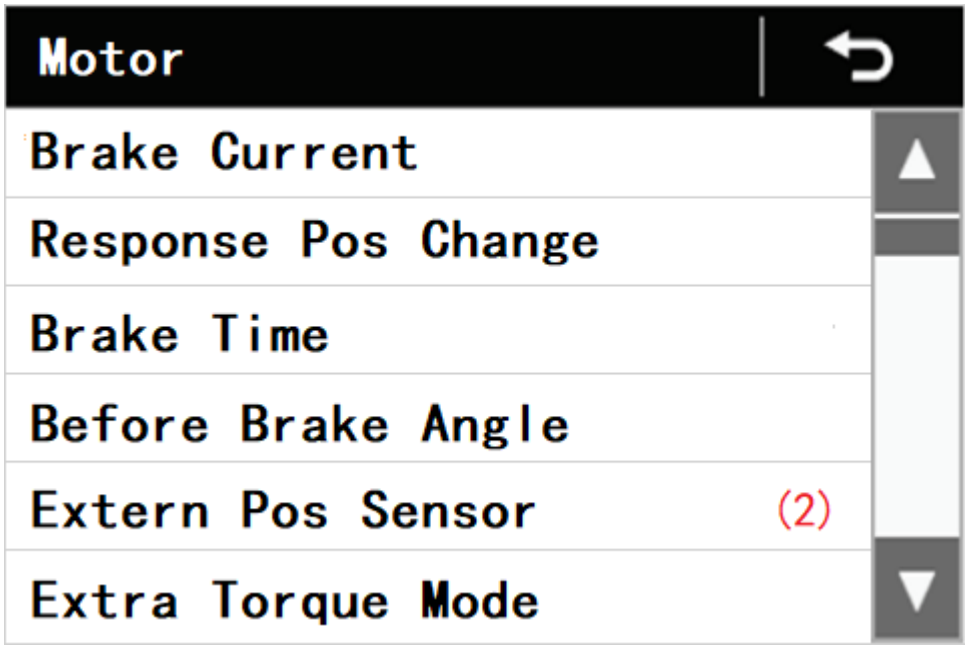
3.4.1 Internal sensor origin setting

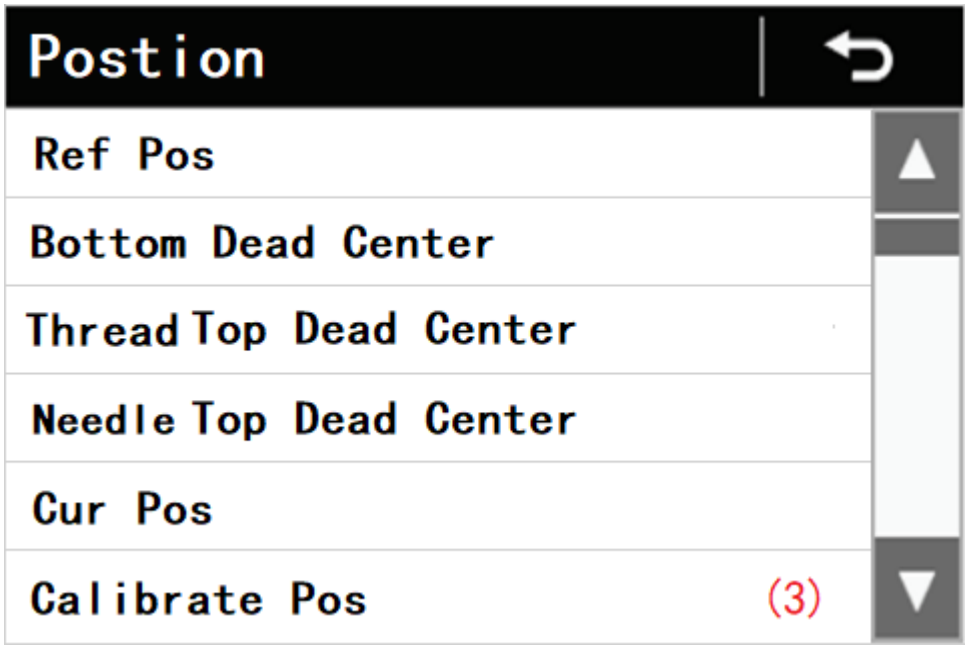


1	Current real-time position
2	Calibrate pos Turn the handwheel until the origin signal icon(3) turns from gray to white, and then continue to turn handwheel until the needle tip just touches the feed dog, And then touch OK Button(4).

3.4.2 External sensor origin setting

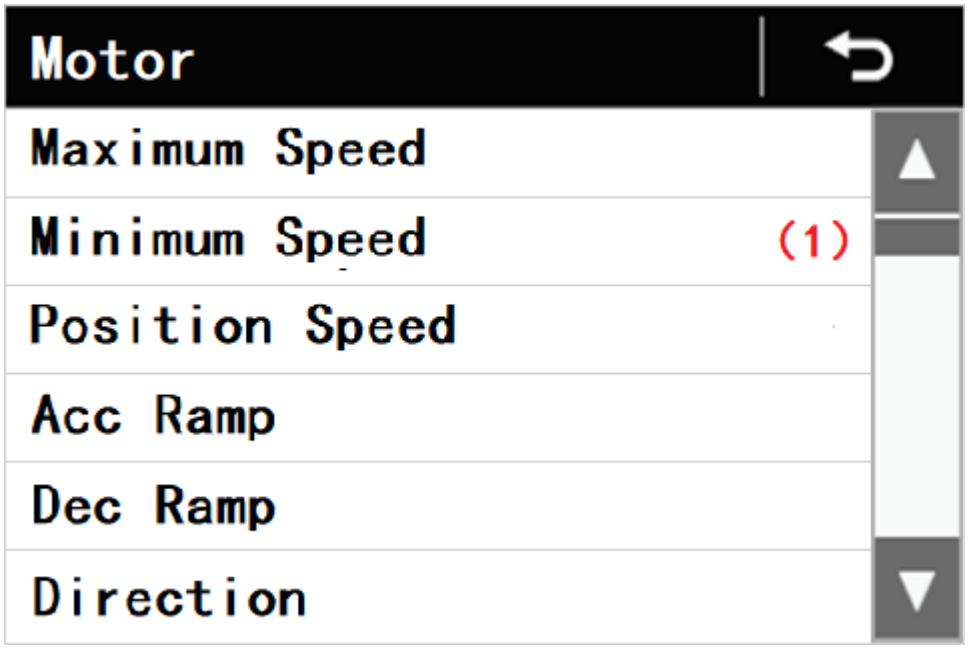


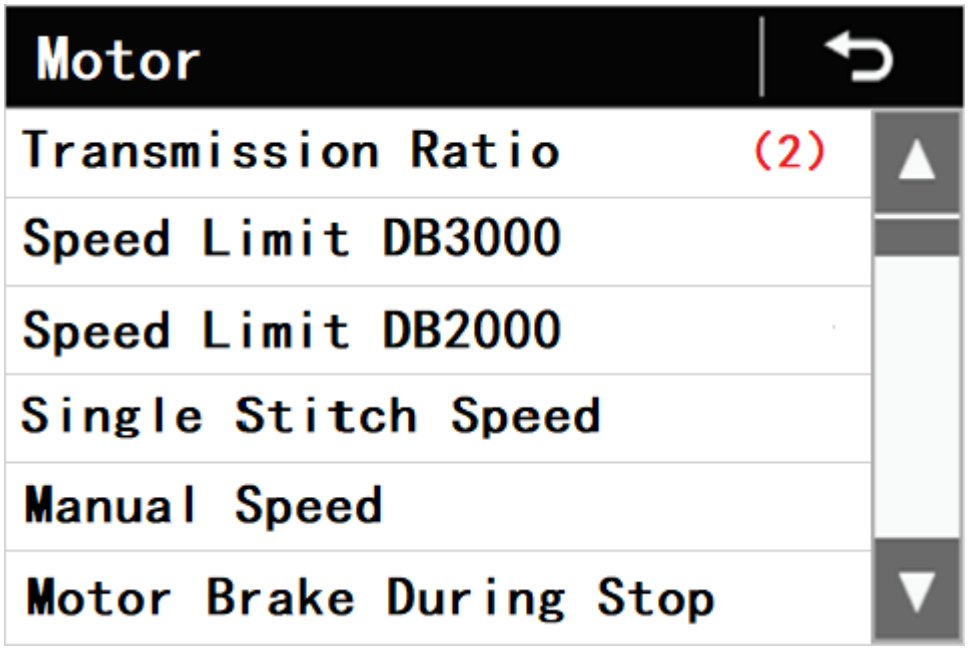


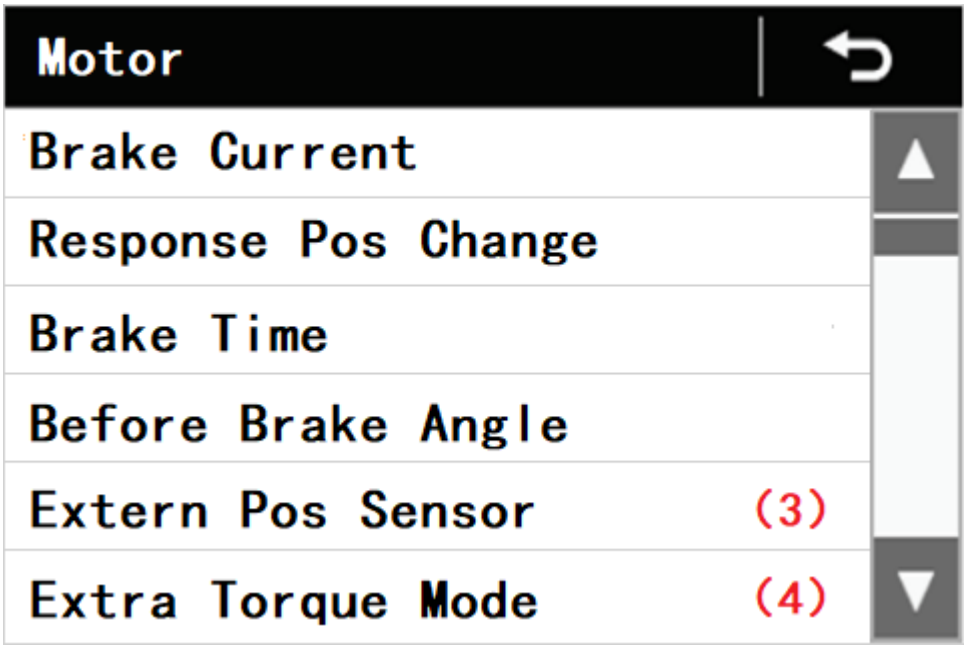


1	transmission ratio transmission ratio = Equipment wheel diameter / Motor wheel diameter * 100
2	OFF: Extern sensor disable ON : Extern sensor enable
3	Calibrate pos Turn the handwheel until the origin signal icon(4) turns from gray to white, and then continue to turn handwheel until the needle tip just touches the feed dog, And then touch OK Button(5).

3.5 How to obtain greater puncture force

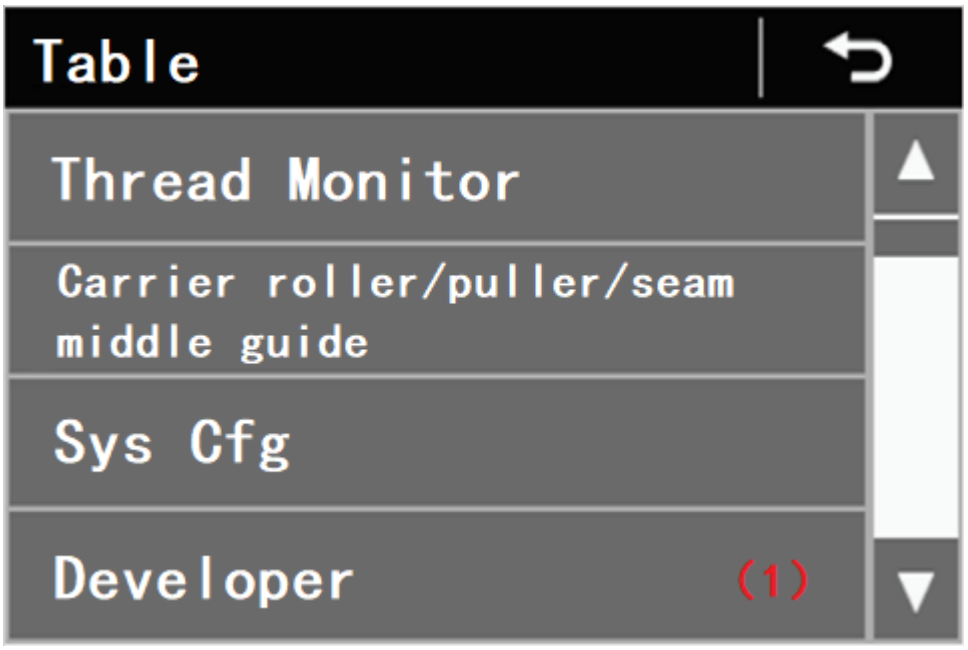


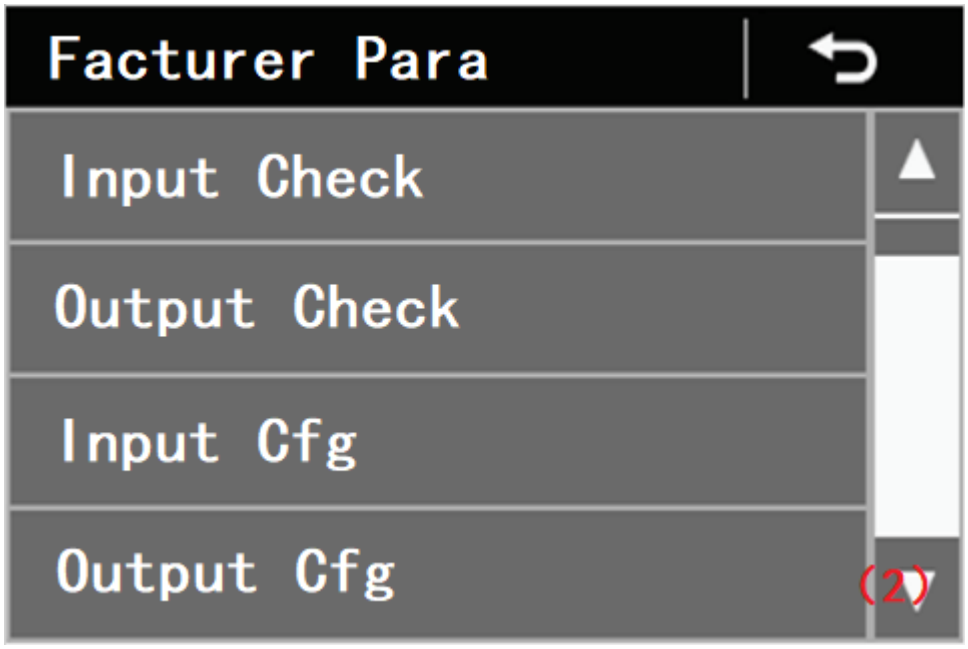


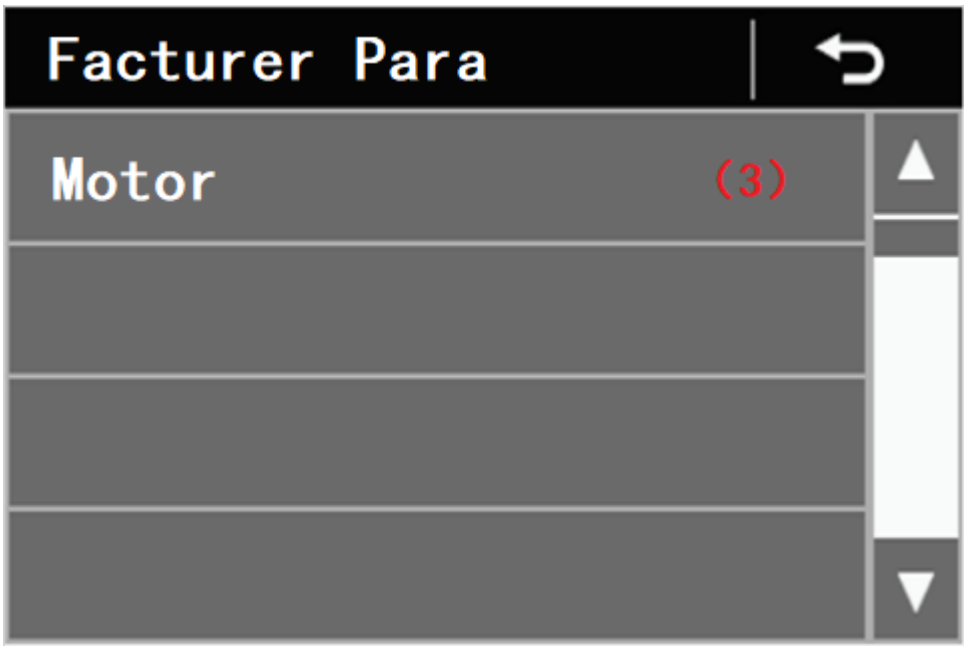


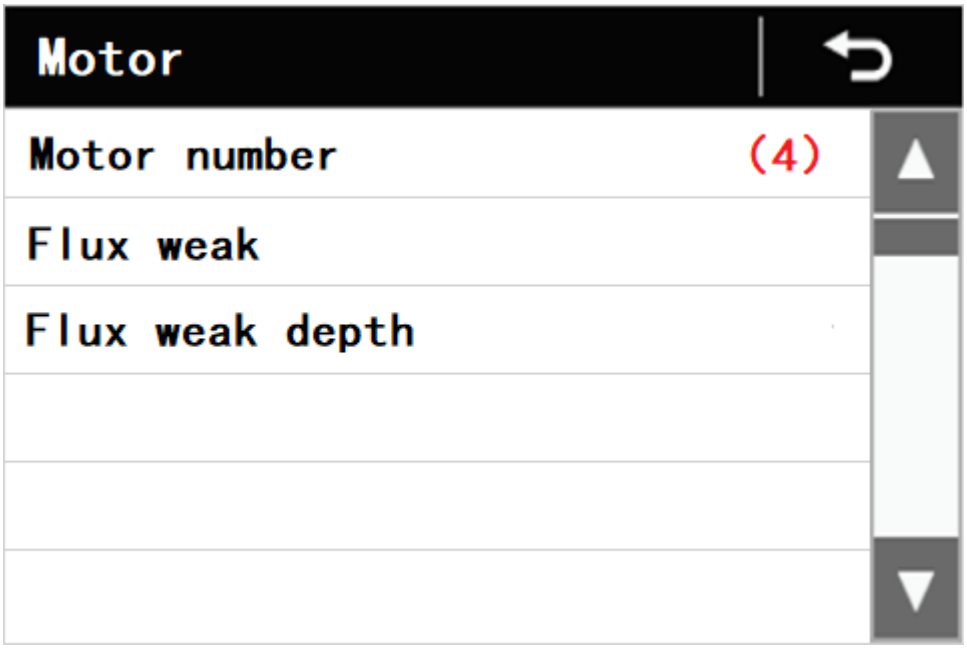
1	Set a higher minimum speed(1) to increase impact Turn on the extra torque mode(4) to increase the torque of the motor by increasing the maximum current of the motor, but at the same time the motor heating will become serious.
2	If the torque is still not enough after using method 1, we can change the transmission ratio of the equipment. By replacing a set of synchronous pulleys, we provide a set of synchronous pulleys with a transmission ratio of 1:1.54, which can magnify the torque of the motor by 1.54 times , But at the same time the maximum speed will also drop by 1.54 times. 1.Replace the synchronous pulley of the equipment and motor. 2.Install the external position sensor of the spindle. 3.Set transmission ratio(2) = 154. 4.On extern pos sensor(3).
3	Replace the motor with a larger torque, please consult the manufacturer for the specific model

3.6 How to set Motor model









1	1. Find the developer(1) in the parameter table. 2. Enter password 3692. 3. Click next page(2). 4. Click on Motor(3) to enter the motor parameter setting page. 5. Click on Motor number(4) to set specific motor.
2	Motor number 00: VS-M00,max speed 3000N/min , max torque 7.2 N/m 01: VS-M01,max speed 3000N/min , max torque 7.2 N/m 02: VS-M02,max speed 3000N/min , max torque 9.4 N/m 03: VS-M03,max speed 2500N/min , max torque 12 N/m

4.Error code

4.1 control error

Error code	
201	Bus voltage is too high
202	Bus voltage is too low
203	24V power supply voltage is too high
204	24V power supply voltage is too low
206	Current sensor fault
208	IPM module overheated
300	Electric angle recognition failed, Check the motor wire
302	Motor encode fault
500	Controller software overcurrent
501	Controller hardware overcurrent
502	Motor leakage
503	Motor overload

4.2 device error

Error code	
Key init state fault	Do not hold down the button when powering up
Equipment rollover	Righting equipment
Pedal signa over range	Replace pedal
Pedal init pos err	Don't step on the pedal when powering up
Up thread alarm	Upper thread is broken
Bottom thread alarm	Bottom thread is broken
Remain thread monitor alarm	replace the bobbin
External output short circuit	Check for external short circuit