

Please read the safety instructions carefully first

HSAT-K9-1C

INSTRUCTION MANUAL BOOK



----- Safety attention -----

1. When using the machine, please strictly observe the safety measures as the following items
2. Please turn off the power or unplug the power plug when the following cases happen.
 - 2 - 1 When threading the stitch, double stitch, segregator and replacing bobbin.
 - 2 - 2 When changing replacing the stitch, the presser foot, the throat plate, bend stitch, the feed dog, the stitch guard, the folder and the cloth guider.
 - 2 - 3 Repairing work
 - 2 - 4 nobody in the working place or leaving the working place
3. Prohibit to touch the power on/off accessory and devices of the machine with oil hand .
4. The repair, alteration, adjustment about the machine should be carried out by professional staff.
5. General repair and maintenance of the machine should be carried out by trained staff.
6. The sewing machines should be regular cleaned while using.
7. The machine should be connected to ground wire for safe operation. It should be used against strong noise such an high-frequency welding machine.
8. Alteration and modification of the machine should be accorded to safety requirements and effective safety measures should be taken. In addition, we assume no responsibility for alteration and modification.

Please read the safety instructions carefully fist

Table of contents

1 Introduction	3
2 Warning labels	3
3 Safety precautions	
➤ Operating environment	4
➤ Safety precautions	4
4. Position of warning labels and safety protection devices	5
5 Safety protection devices	
➤ Eye guard	5
➤ Finger Guard	5
➤ Presser foot	6
➤ Finger sleeve	6
6. Common problems from daily operations	
➤ Oil supply	6
➤ Oil replacement	7
➤ Method of oil discharge	7
➤ Overhaul and replacement of filters	7
➤ Cleaning of the sewing machine	7
➤ Method of threading	8
➤ Pressure adjustment of presser foot	9
➤ Adjustment of differential ratio	9
➤ Adjustment of stitch length	9
➤ Replacement of the upper knife	9
➤ Replacement of the lower knife	9
➤ Adjustment of chain	10
➤ The grinding method of knives	10
➤ Setting the presser foot	11
➤ Standard installation position and adjustment of faller gill	12
7. Instructions for use of the machine	
➤ Ventilation	13
➤ Electrification	13
8. Instructions for use of operation panel	
➤ About the pages	14
➤ About the interface	14
1) Home page	15
2) Mode description	15
3) Piecework display	15
4) Size selection	16
5) System settings	16
➤ Functional test	
1) Input test	20
2) Output test	21
3) Motor test	22

Please read the safety instructions carefully fist

4) Speed controller test.....	22
5) Spindle motor encoder.....	22
9. Instructions for adjustment of the machine	
➤Procedures for starting the automatic feeding.....	23
➤Instructions for adjustment of the rear stretcher.....	24
➤Procedures for adjustment of overcast detection sensitivity.....	24
➤Procedures for adjusting layered detection sensitivity.....	26
➤Procedures for adjusting optical sensor sensitivity.....	27

1. Introduction




- This instruction manual describes how to use our products safely.
- Read this instruction manual and learn very carefully how to operate, adjust and service this sewing machine before beginning any of the procedures.

2. Indications of dangers, warnings and cautions






To prevent accidents and ensure safety, warning indications which show the degree of danger are used on ur products and in this manual.

Follow all warnings and instructions. Indication labels should be found easily. Attach new labels when they are stained or removed. Contact our sales department when new labels are needed.




Symbols, signs and/or signal words which attract users`attention

 DANGER	Indicates an immediate hazard to life or limb.
 WARNING	Indicates a potential hazaed to life or limb.
 CAUTION	Indicates a possible mistake that could result in injury or damage.

Symbols and messages

	Be sure to follow the instructions when operate the machine.
	It's dangerous to get an electrical shock.
	It's dangerous to injure your hands or fingers.
	Incates a danger of burn injury due to high temperature.
	Never do this.

Please read the safety instructions carefully fist

	Shut off the power when checking ,adjusting and repairing the machine or when lightning may strike.
	Be sure to ground the machine and labor saying device securely.
	Denotes the normal rotating direction of the machine pully.

3. Safety precautions

➤ Circumstances

The environment in which our industrial sewing machines are used may seriously affect their lives, functions, erformance and/or safety.



For safety, do not use the machine under the circumstances below.

1. Do not use the machine near objects which make noise such as a high frequency welder, etc.
2. Do not use or store the machine in the air which has vapor from chemicals, or do not expose the device to chemicals.
3. Do not leave the machine outside, in high temperatures or the direct sun.
4. Do not use the machine in the places of high ambient temperature and humidity that seriously affects sewing machines. 5. Do not use the machine on the condition that the voltage fluctuation range is more than $\pm 10\%$ of the rated voltage.
6. Do not use the machine in the place where the supply voltage specified for the control motor cannot be properly obtained.

➤ Safety measures



(1) Safety precautions when you perform maintenance on the machine.

- Always turn off the power unplug the machine and then make sure that the machine does not run by pressing the treadle before performing any maintenance, such as checking, repairing, cleaning, etc. However, if you need to perform these procedures with the power on, to prevent accidents due to the unexpected start of the machine and users` misoperation, establish your own procedures for safely and follow them.
- Always turn off the power and unplug the machine before performing the procedures shown below.
 - Lubrication Threading
 - Cleaning
 - Replacing the needle
 - Checking/replacing the oil element
 - Replacing the oil
- Always turn off the power and unplug the machine before performing the procedures shown below.
 - Adjusting the stitch length
 - Adjusting the differential feed ratio
- Only well-trained people should perform routine daily maintenance and/or repair the machine.
- Do not modify the machine yourself.
 - ※ Consult your local Hikari sales office or representative for modification.

4. Location of warning labels and safety devices

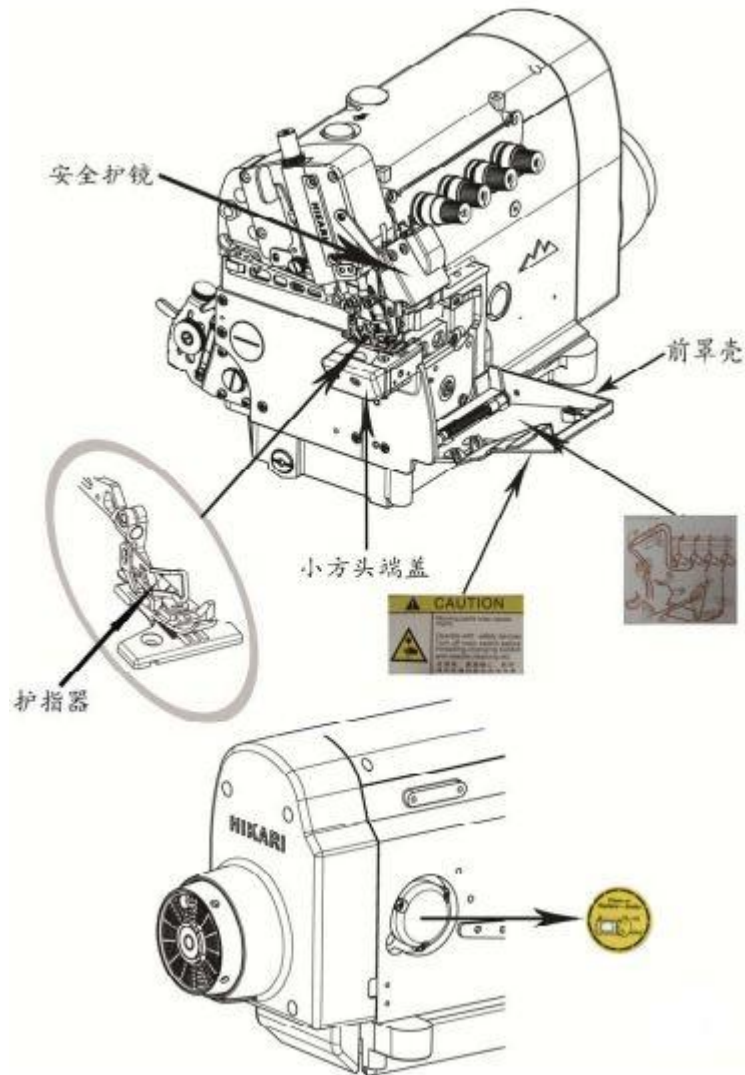



Fig.1

5. Protectors for safely


CAUTION

➤ Eye guard

 Never leave the eye guard open

For the safety of eyes, do not operate the machine with the eye guard open. The eye guard will prevent any pieces of the broken needle from getting into your eyes if the needle should break during sewing.


➤ Finger guard

 Never insert any of your fingers.

Please read the safety instructions carefully fist


To prevent the needle that moves up and down from contacting any of your body, the finger guard is installed close to the needle. However, there is clearance above the finger guard for easy threading. Be careful that the needle may penetrate any of your fingers if you insert it into this clearance.

➤ **Presser foot**

 Never insert any of your fingers.

There is a clearance of more than 5mm between the top surface of the needle plate and the presser foot. Be careful that none of your fingers are caught in this clearance. Never insert any of your fingers under the presser foot when raising the presser foot with the knee switch or automatically raising it with the treadle.

➤ **Front cover**

 Never insert any of your fingers.

The looper travels left to right while drawing an arc as seen from the front of the machine. To prevent the looper from contacting any part of your body, be sure to operate the machine with the front cover closed securely.

6. General issue of operation

➤ **Lubrication**



CAUTION

When lubrication the machine and/or replacing the oil, use our company recommended oil. Using other oils may damage machine.

1. Oil

Use the oil "HIGH SPEED SEWING MACHINE OIL" specified by our company (ISO Viscosity Grade 22).

2. To fill the machine with oil (Fig.2)

Remove cap 1, add the oil until the oil level (see oil gauge 2) reaches (H). After filling the tank with oil replace cap 1.

3. Required amount of oil (Fig.2)

(H) on oil gauge 2: Upper limit (L) on oil gauge 2: Lower limit The oil level should always lie between (H) and (L).

4. Manual lubrication (Fig.4)



CAUTION

Always turn off the power and unplug the machine when you apply oil by hand.

Apply 2 or 3 drops of oil to needle bar 3 and upper looper holder 4 by hand when the machine is used for the first time or has been left unused for some time.

5. Checking oil circulation (Fig.5)

Please read the safety instructions carefully first

Once the machine has been properly filled with oil, press the machine treadle to run the machine and check oil gauge window 5 to see if the oil is flowing.

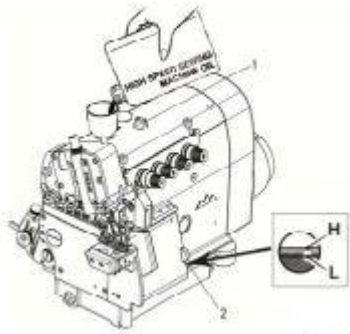


Fig.2

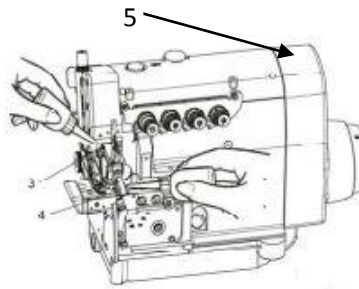


Fig.3

➤ Oil replacement



CAUTION

Well-qualified technicians should replace the oil. Replace the oil one month after the first use and thereafter every six months. If you keep using the old oil, it may cause the damage to the machine.

➤ To drain the oil

1. Drain the oil by removing screw 3 on the left side of the oil pan.
2. Tighten screw 3 after draining (Fig.6)

➤ Checking and replacing the filter

Always turn off the power, unplug the machine and then well-qualified technicians should check and replace the filter. If filter 7 is clogged up with dust and dirt, the machine will not be properly lubricated. Check filter 7 every six months, and clean or replace it if necessary.

To remove the filter (Fig.7)

Remove parts 4 to 7, and check the filter by referring to the illustration. If filter 7 is completely damaged, replace it with a new one.

➤ Cleaning the machine

Always turn off the power and unplug the machine when you clean the machine.
Clean the grooves of the needle plate and the area around the feed dogs (Fig.8)

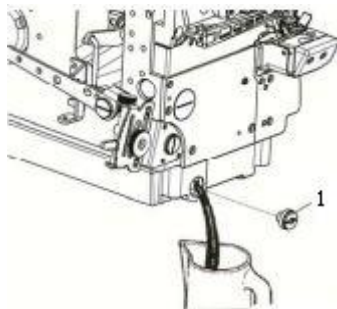


Fig.6



Fig.7

Please read the safety instructions carefully fist

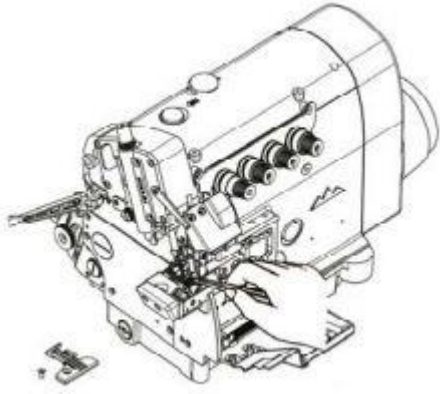


Fig.8

➤ Threading

Always turn off the power and unplug the machine when you thread the machine.

1. Open cloth plate 1, eye guard 2, front cover 3, and presser bar 4. Put each part back after threading the machine (Fig.9)

2. In case the machine is threaded previously (Fig.10)

A: Knot the preset thread and the thread being used together to thread the machine.

B: Needle thread Pull the knot toward the needle, trim the knot off and then thread the needle.

C: Looper thread Trim the knots off neatly after passing through the eye of the looper.

3. If the machine is not threaded Thread the machine properly by referring to the label attached to the machine.

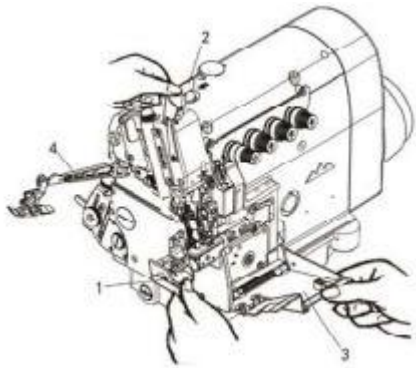


Fig.9

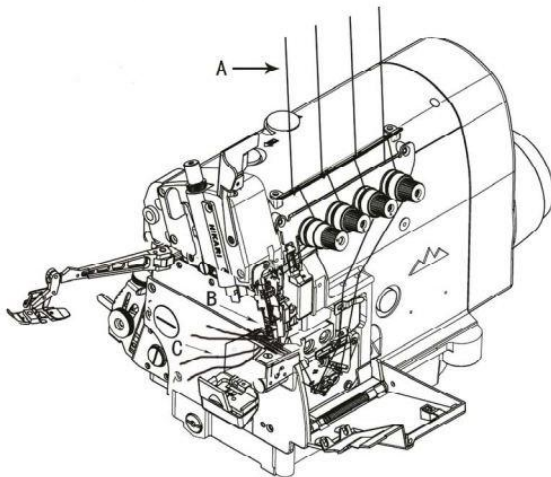


Fig.10

Please read the safety instructions carefully fist

➤ Adjusting presser foot pressure

The presser foot pressure should be as light as possible, yet sufficient to feed the fabric correctly and provide the uniform stitch formation.。

Adjust presser foot pressure by turning adjustment screw 3. (图 16)

➤ Adjusting the differential feed ratio

1. Loosen nut, to increase the differential feed ratio, bring lever down. The finished fabric is shrunk. To decrease the differential feed ratio, bring lever up. The finished fabric is stretched.。

2. After this adjustment is made, tighten nut. (图 17)

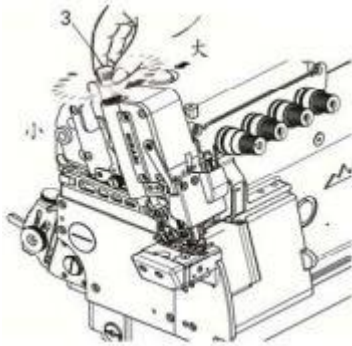


Fig.16

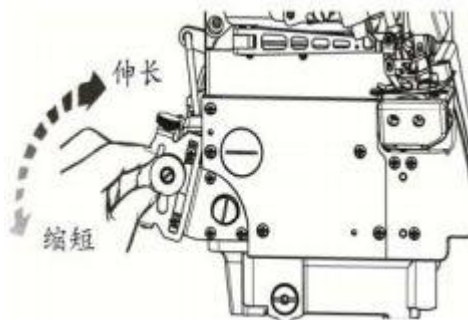


Fig.17

➤ Adjusting stitch length

Always turn off the power and unplug the machine when adjusting the stitch length.

1. With push button 1 depressed, turn handwheel 2 so that the push button 1 goes further into the depth (图 19)

2. With the push button in the place stated in 1. Turning handwheel 2 counterclockwise produces coarse stitches. Turning handwheel 2 clockwise produces fine stitches

NOTE:

Stitch length adjustment must only be made after the differential feed ratio has



CAUTION

Always turn off the power, disconnect the power cord and then only well-qualified technicians should replace and adjust the knife.

Pay attention to the knife edges not to injure your hands and fingers.

Please read the safety instructions carefully first

➤ Replacing the upper knife

1. Loosen screw 1. Bring lower knife holder 2 to its farthest position to the left. Tighten screw 1 temporarily.
2. Remove screw 3 and upper knife 4. Replace the upper knife with a new one. Tighten screw 3 temporarily. Turn the handwheel until the upper knife holder is at its lowest position. There should be 0.5-1.0mm overlap of the upper and lower knives. Adjustment is made by moving the upper knife up or down. Tighten screw 3.
3. Cross upper knife 4 and lower knife 6 with each other at the center (A) of their cutting edges (Fig.21). Loosen screw 1. Then check to make sure that the upper knife tightly touches the lower knife. Tighten screw 1.
4. To check proper cutting, place a thread between the upper and lower knives and turn the handwheel.

➤ Replacing the lower knife

1. Loosen screw 1. Bring lower knife holder 2 to its farthest position to the left. Tighten screw 1 temporarily.
2. Loosen screw, remove lower knife, replace it with a new knife. Adjust the lower knife so that the cutting edge is 0-0.3mm below the top surface of the needle plate. Tighten screw 5.
3. Follow procedures 3 and 4 in "Replacing the upper knife".

➤ Adjusting overedge width

1. Loosen screw 1. Bring lower knife holder 2 to the farthest position to the left. Tighten screw 1 temporarily.
2. Loosen screw 6, Adjusting overedge width by moving upper knife clamp 8 to the left or right.
3. Follow procedures 3 and 4 in "Replacing the upper knife".

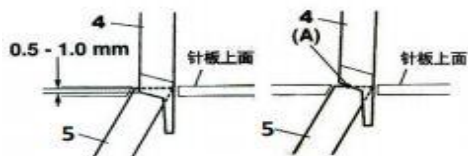


Fig.18

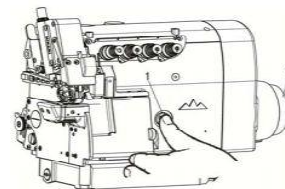


Fig.19

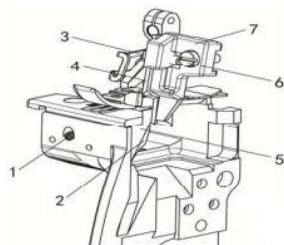


Fig.20



Fig.21

➤ Sharpening the knives

The upper knife is need to resharpen is for some time. Resharpen the lower knife for the proper cutting action.

1. Resharpen the lower knife ((Fig 21))

Please read the safety instructions carefully fist

If you sharpen the lower knife improperly, insufficient cutting will be obtained or the lower knife will become immediately dull. Be careful.

2. Upper knife

A special knife grinder is needed to sharpen the upper knife. It is recommended when sharpening the upper knife that you ask Hikari direct distributors or our agents. To increase efficiency, always prepare a spare upper knife.

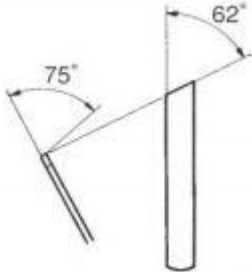


Fig.21

➤ Changing the fulcrum on the presser arm



CAUTION

Always turn off the power, unplug the machine and then well-qualified technicians should change the fulcrum on the presser arm.

1. Set the presser foot, and then bring down the feed dog to the bottom of its travel.
2. Move collar to the right while pressing presser foot shaft in the direction of A, tighten screw. (There should be a clearance of 1mm between presser foot lift lever and upper limit screw.)
3. Check to see if the slot(s) of the needle(s) on the presser foot is (are) aligned with that (those) on the needle plate. If not, loosen fixed presser foot bushings screw, and adjust presser arm by moving it left or right. After this adjustment, tighten screw. (Fig 22、 Fig 23)

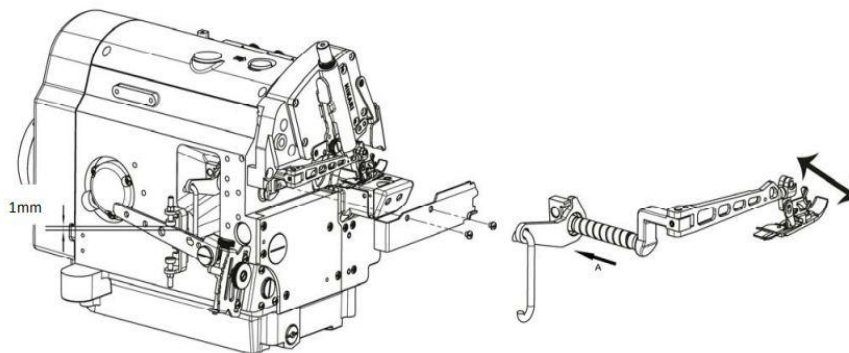


Fig22

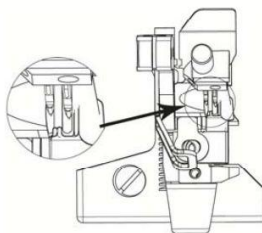


Fig 23

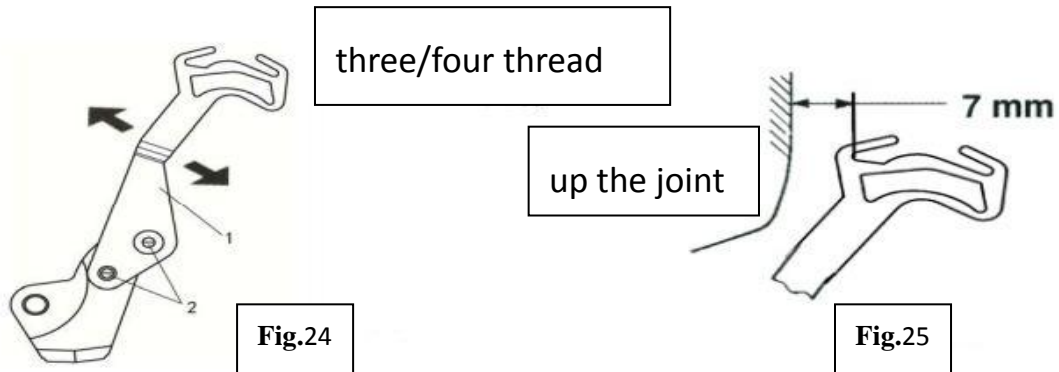
Please read the safety instructions carefully first

➤ Positioning and adjusting the needle thread take - up

CAUTION

Always turn off the power, unplug the machine and then well-qualified technicians should adjust the needle thread take-up.

When needle thread take-up 1 is at the bottom of its travel, adjust the distance from the front of the arm head to the needle thread take-up. To make this adjustment, loosen screws 2.

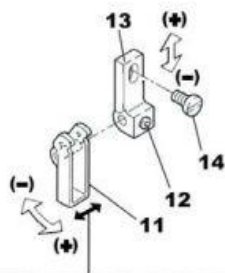


➤ Positioning the thread guides/Adjusting the amount thread to be supplied from the needle thread take - up

The location of each needle thread guide varies with types of machine. When the needle thread take-up is at the bottom and the top of its travel, position each needle thread guide according to the machine being used.

3, 4 thread series Adjusting the needle thread guides (Fig. 26)

Loosen screws 12 and 14. Adjust thread guides 11 and needle thread bracket 13 by moving them in the direction of the arrows. To increase the amount of thread to be supplied, move each thread guide, and needle thread bracket in the direction of (+). To decrease the amount of thread to be supplied, moving each thread guide, and needle thread bracket in the direction of (-). After this adjustment, tighten screws 12 to 14.



Adjust the left-right position of through thread piece No.11, made the line up piece of needle in the centre of two-ply

Fig. 26

Please read the safety instructions carefully fist

7.Instructions for use of the machine

➤ Ventilation

1. Insert an 8 mm diameter air tube into the device shown below
2. Turn on the external air switch
3. After ventilation, check whether the air pressure pointer shown below has pointed to the factory-set minimum air pressure (0.5MPa)

Master air valve air pressure 0.5MPa



Figure 2: Schematic diagram of the master air valve for the crewneck machine

The air pressure of the feed cylinder is 0.3MPa



Figure 3: Schematic diagram of the feed cylinder relief valve

➤ Electrification

1. This equipment uses 220VAC 50HZ AC power supply; make sure that the socket is reliably

Please read the safety instructions carefully fist

grounded

2. After the power switch is turned on, the display screen and the operation panel of the machine head are switched on, and the motor is locked.

8.Instructions for use of operation panel


➤ About the pages

There are a total of five user pages in K9-1 C, among which the selected page will become gray. The five pages are composed of

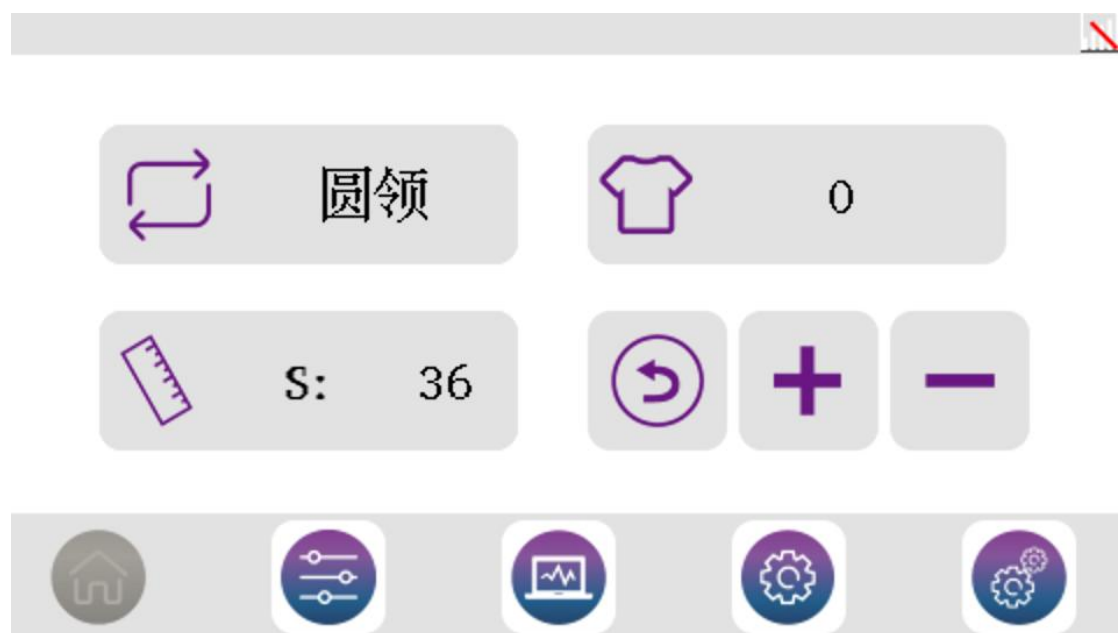
1) Home page 

2) Function switch page 

3) Parameter monitoring page 

4) Parameter setting page 

5) System settings page 

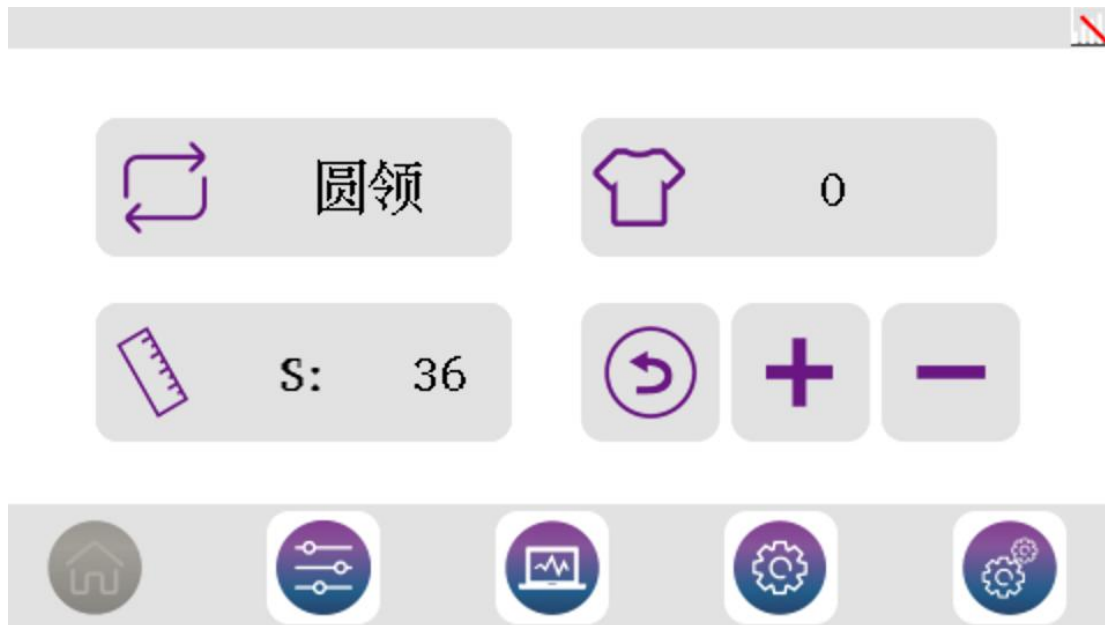


Please read the safety instructions carefully fist

➤ Interface description

1) Home page:

In the lower part of the page is the page switching button; click the button to enter the corresponding page. Mode selection is available in the home page. Besides the function of current size value, number of workpieces, workpiece correction and system reset, K9-1C also provides two modes: attaching crewneck and attaching upper waistband.



Mode declarations:

Crewneck mode:

Step backward on the pedal to start the machine. In this mode, the machine provides the functions of automatic overcast search, automatic stirring and automatic layering.

Waistband mode:

Control the motor through the knee control button, or start the device by stepping backward on the pedal to activate the puller.

2) Display the number of products completed:



Click

to reset the number of workpieces completed, which



can also be corrected by the

button.

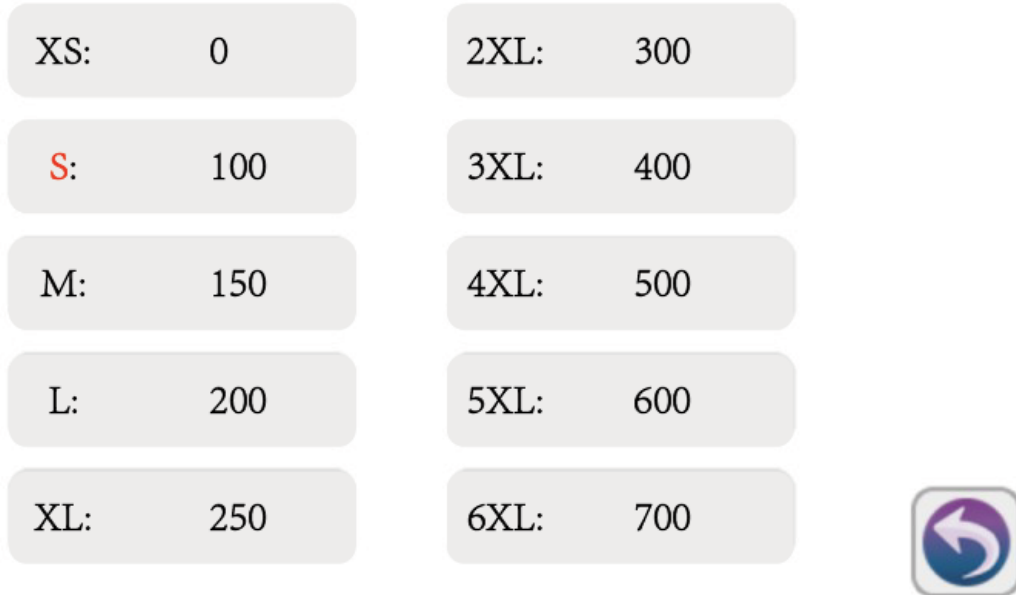
3) Size Select page

Please read the safety instructions carefully fist



Click the interface

Size Select button to enter the size setting



For example: 700 refers to the length of stroke 7cm that the rear puller retreats.



The selected size will be highlighted in red.



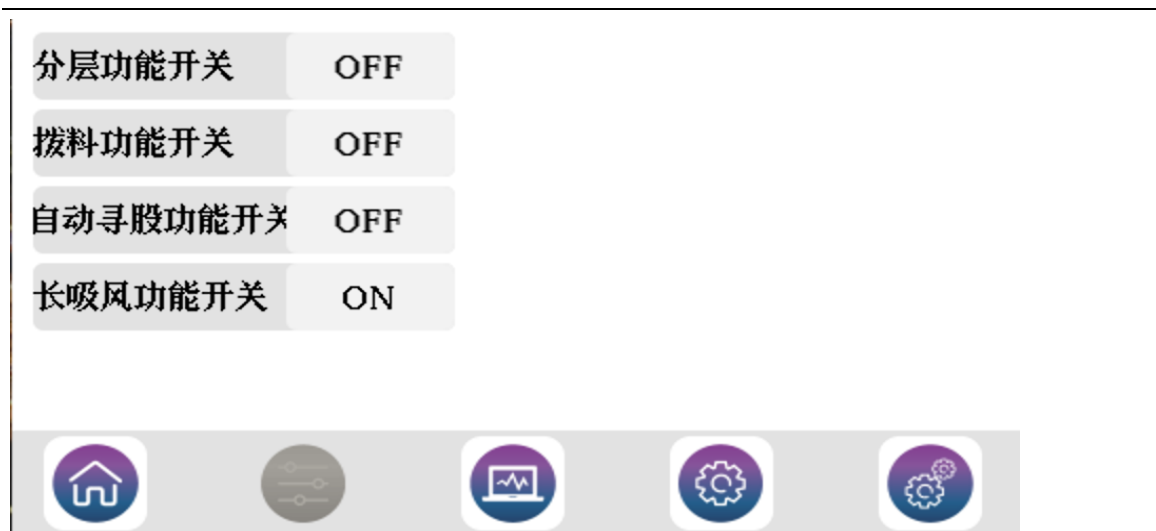
Exit the size setting page via the Back button

and return to the home page,

where the current size value and its specific size are also displayed.

4) Function switch page:

Please read the safety instructions carefully fist



Descriptions about K9-1C crewneck mode :

(1) "Layering switch": used to control the layering function. After the overcast position is automatically identified, the layering mechanism will start to act. Turn off this function to disable the layering mechanism. "ON" is to enable the layering function, while "OFF" is to disable the function. By default it is set to ON.

(2) "Stirring switch": used to control the stirring function. After the overcast position is automatically identified, the stirring mechanism will start to act. Turn off this function to disable the stirring mechanism.

"ON" is to enable the stirring function, while "OFF" is to disable the function.

By default it is set to ON.

(3) "Automatic overcast search switch": to control the automatic overcast search function. When this function is activated, step backward on the second part of the pedal to automatically search the overcast. The puller motor will stretch back, and the feed motor will start feeding to detect the overcast. After the overcast is identified, continue to move forward for a certain distance (determined by the overcast end position parameter). Then carry out selective actions according to the status of the first two function switches, and lower the presser foot.

"ON" is to enable the automatic overcast search function, while "OFF" is to disable the function.

By default it is set to ON.

(4) "Long pneumatic suction switch": to control whether the machine is in the pneumatic suction state during sewing. After this function is enabled, the "suction delay stitches" starts, and the long pneumatic suction function becomes active.

"ON" is to enable the long pneumatic suction function, and "OFF" is to disable the function.

By default it is set to ON.

5) Parameter setting page

Please read the safety instructions carefully fist

剪线延迟针数	5	分层延迟时间	150
股位停止位置	35	压脚延迟时间	200
吸风延迟针数	5	拨料延迟时间	500
吸风保持时间	1000	拉轮电机行程	500
上料启动电压	30		



Parameter description:

(1) "Number of delay stitches for thread trimming": After the preset "number of delay stitches for thread trimming" are satisfied, take the fabric away from the optical sensor and the system will trigger the function of thread trimming .

(2) "Overcast end position": After the overcast detection device detects the overcast position, adjust the distance for which the cloth continues to move forward to control overcast end position.

(3) "Number of stitches for sucking delay": After the function of long pneumatic suction is enabled, the machine starts sewing and the function of long pneumatic suction is activated.

(4) "Sucking hold time": refers to the time for which "tension releasing cylinder" and "sucking cylinder" keep working after "thread trimming" is triggered,

(5) "Feed start voltage": refers to the voltage of the machine in the automatic mode after the pedal is stepped on. For example, the voltage of automatic overcast searching in the crewneck mode and the rear puller motor in the waist mode can be determined by the pedal voltage in the test page.

(6) "Layering delay time": refers to the delay time from overcast detecting to layering, when the "layering switch is ON".

(7) "Presser foot delay time": refers to the time from the end of material stirring to the automatic lowering of the presser foot. If the foot pedal is not lowered at that time, the presser foot will remain raised.

(8) "Stirring delay time": refers to the time from the end of layering to stirring, when "stirring switch is ON" and the layering function is activated. If the layering function is nonactivated, it refers to the time from overcast detecting to beginning of stirring.

(9) "Puller motor stroke": used to control the distance for which the rear puller retreats when the overcast is automatically positioned in crewneck mode; in waistband mode, it is used to control the distance for which the rear puller moves. The sum of the size value and the rear puller size value is 1200 (12 cm) at most.

The parameters above are default parameters. In practice, parameters can be adjusted according to

Please read the safety instructions carefully fist

changes of the on-site process.

6) System settings page



This page contains the following information:

"Screen": version number of screen software ;

"Software version": the version number of electronic control software ;

"Model": screen hardware model

"Optical sensor": The version number of the sewing optical sensor

User can enter the following sub-pages through the system settings page



1) The locking button , which is equipped with face recognition technique and not activated yet.



2) The drive parameter setting port . For any modification , please contact the Third R&D Department of the technical center. Non-HIKARI personnel are prohibited from modifying any of the parameters which are not included in this manual.



3) Factory reset button , press the button according to the operation prompts to restore factory settings.





4) Language settings , press the button to set the system language and make a switch

Please read the safety instructions carefully fist

between the Chinese and the English; user can choose to turn on the buzzer and voice.



5) USB flash disk upgrading page , through which you can upgrade the software of the screen and the master control.

6) The version history page , used to record the upgrading history of the panel.

Please read the safety instructions carefully fist

➤ Test specifications

In this page, the foot pedal is inactive, so that you cannot step on the foot pedal to start the process of sewing or raise the presser foot. The refresh rate of the panel is 500ms, and it's normal for 1s display delay.

There are two pages in the test page, of which the number of pages is displayed on the left



1/2



. The pages can be switched through and .



1) Input:

K9-1C has a total of 5 sensors, among which three sensors are magnet proximity switches:

X1 Overcast search sensor:

It is used to detect the overcast position. The light of the sensor is always red, and goes out when the overcast position is detected.


X4 Layering sensor:

It is used to detect the assembled part. When the collar stripe is sewn for a round, the assembled part will trigger the sensor to prevent the collar stripe from being hooked.

Please read the safety instructions carefully fist

X5 Origin sensor

Used to detect whether the rear puller motor has reached the origin.

The red  status on the panel is related to the detection status of the sensor. In the ordinary state as shown in the picture, the light will turn red or green after being triggered.

X2Knew sensor:

The sensor will turn red when pressed, and turn green when released.

X3 sewing optical sensor:

The sensor is used to detect whether the fabric is placed on the machine. It turns green when there is no fabric, and turns red in the case of presence of the fabric. Furthermore, the user can judge the sewing status according to the leftmost LED light on the Supu Electric Control.

Number of sewn stitches:

Turn the handwheel by hand, and the number of stitches will increase by 1 for a round.

2) Output test:

K9-1C has a total of 6 solenoid valves, which are used to control

Presser foot cylinder (y1) layering cylinder (y2) stirring cylinder (y3) tension releasing cylinder (Y4)

Overcast search cylinder (Y5) pneumatic suction cylinder (Y6)

"ON" means that the cylinder is activated

"OFF" means that the cylinder restores to its normal position, namely the initial position of the cylinder ventilated and electrified



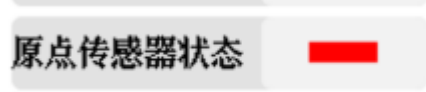
3) Motor test:



The movement of the two motors can be controlled by these two buttons.

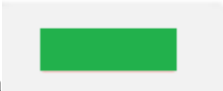
The feed motor can only move in one direction;

The left button of the puller motor controls the forward movement of the puller motor, and the right button controls the backward movement of the puller motor.



原点传感器状态

When the puller advances to the origin,

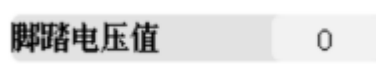


the button will turn green

Note: When the sensor is lit up, click the left button again to stop forward movement of the puller motor.

Together with solenoid valve, it can activate the feed action, and systematically check the overcast detection function.

4) Speedcontroller test:



脚踏电压值

0

In case the pedal is not stepped on, the pedal voltage is around 744 by default, and it is normal that the value fluctuates within ± 5 ;

After the user steps backward on part of the pedal: the voltage value is displayed as about 400.

After the user steps backward on the secondary part of the pedal: the minimum value of the voltage is 0. Due to the speed controller, it is normal that the minimum value of the backward stepping voltage falls within 10, which determines the "starting voltage value" in the "parameter setting page".

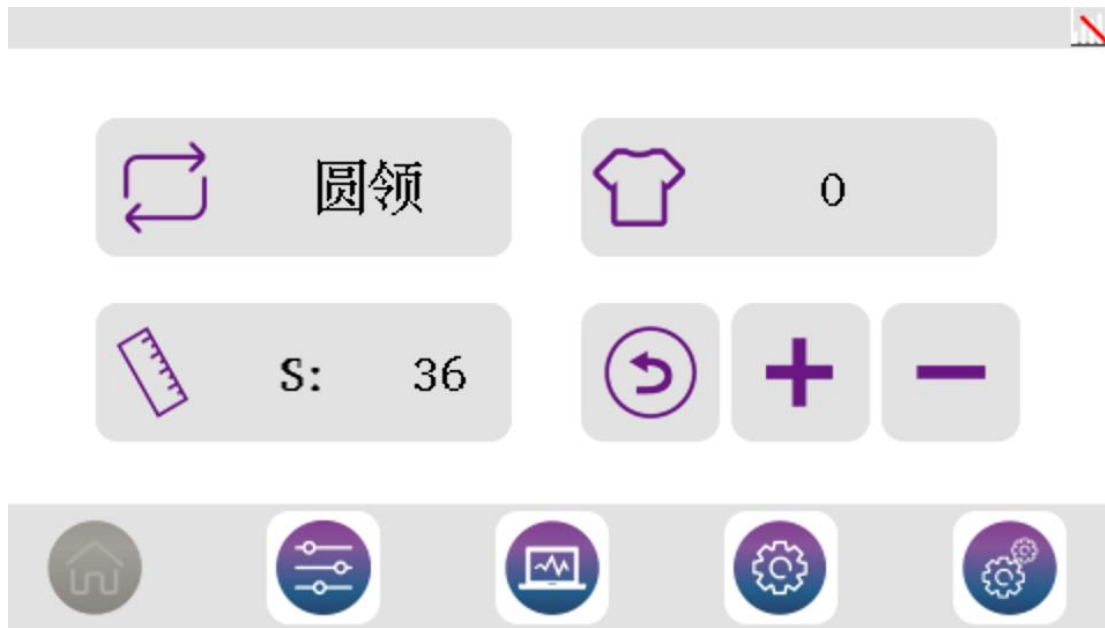
Forward stepping: the voltage value is 3846 at the most.

Please read the safety instructions carefully fist

9.□ Instructions for adjustment of the machine

➤ Procedures for starting the automatic feeding

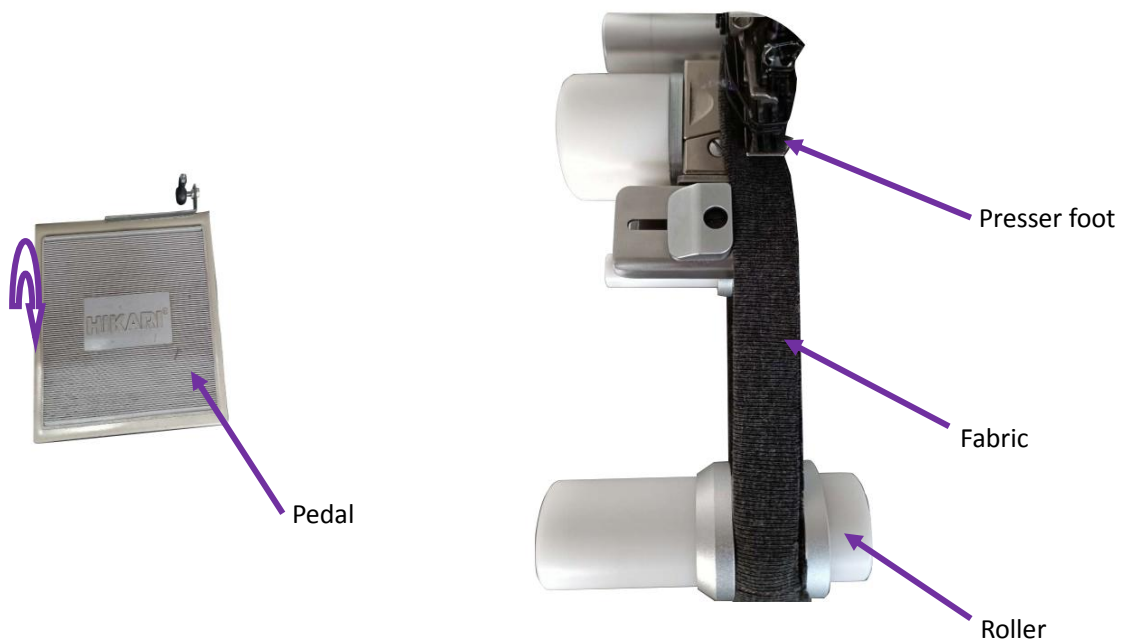
1. Turn on the power switch and the system will display the following picture. It's necessary to reset before working



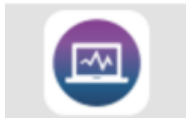
Please read the safety instructions carefully fist

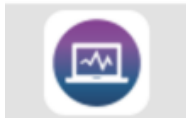
The following actions can only be performed when the system displays the page shown above.

Place the collar stripe between the two baffles of the roller and cover the optical sensor (see the picture below). After confirming that everything is correct, step back on the pedal lightly to feed the materials.



➤ Instructions for adjustment of the rear stretcher:



Click  to enter the following page

Please read the safety instructions carefully fist



Click to enter the next page, as shown in the figure



Click the OFF button next to the Overcast Search Cylinder Status and turn it on. After it turns ON, the rear roller is lifted, and the overcast detection function is activated.

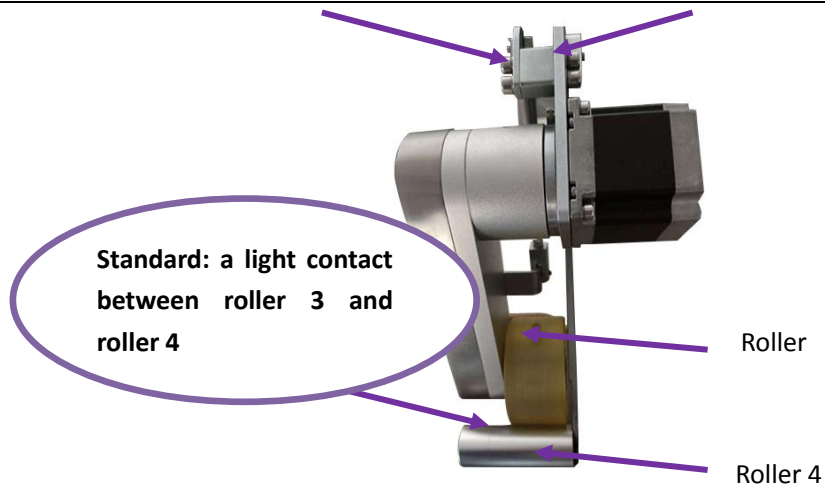
➤ Adjustment of rear stretcher parts

Loosen the screw 1, push part 2 back and forth, and adjust the interval between the roller 3 and the roller 4

2

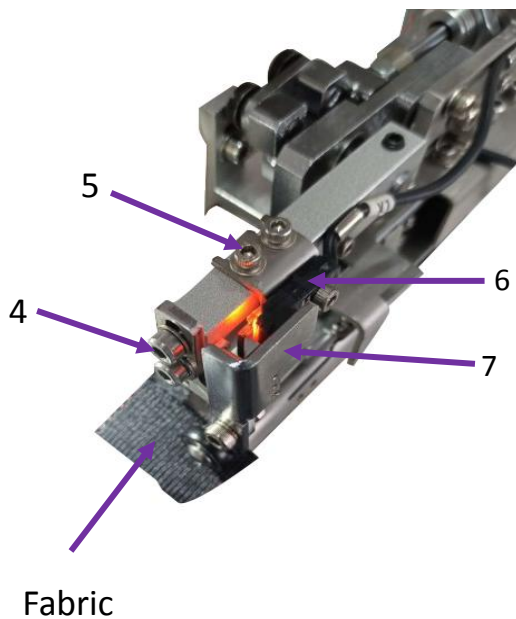
1

Please read the safety instructions carefully fist



➤ □ Procedures for adjustment of overcast detection sensitivity

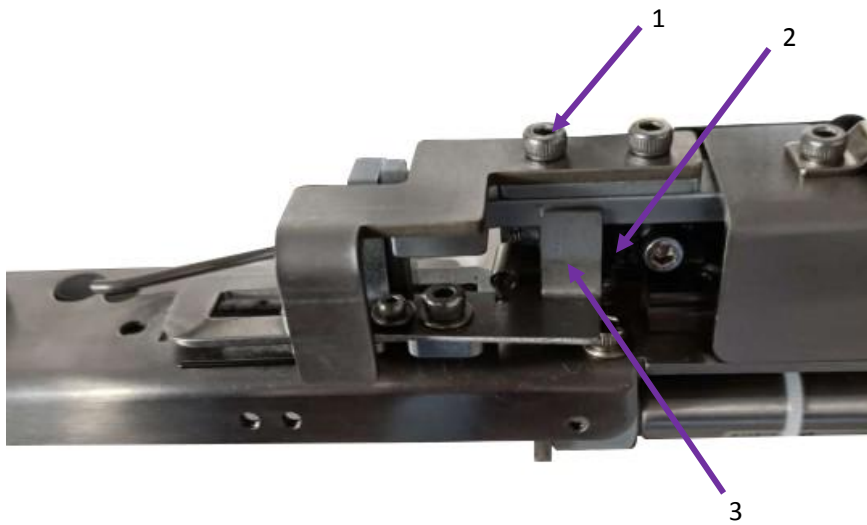
1. Loosen the screw 4, and longitudinally adjust the detection height of the overcast position. The standard interval is 1mm
2. Loosen the screw 5, and horizontally adjust the overcast detection response time. The standard interval between the sensor 6 and the sensor 7 is 1mm



Please read the safety instructions carefully fist

➤ Procedures for adjusting layered detection sensitivity

Loosen the screw 1, and horizontally adjust the overcast search response time. The standard interval between the sensor 2 and the sensor 3 is 1mm



Please read the safety instructions carefully fist

➤ Procedures for adjusting optical sensor sensitivity

Possible occasions in which the optical sensor sensitivity should be adjusted:

1. The default factory settings work in most cases. For ultra-thin fabrics, it's necessary to adjust the optical sensor detection threshold, and otherwise no fabric will be detected.
2. If the fabric to be sewn is dusty, it is necessary to properly adjust the optical sensor emission power to ensure the detection stability and achieve the optimal detection effect.

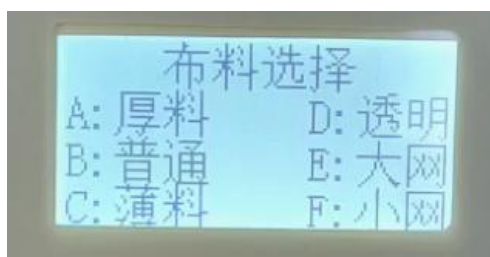
The optical sensor detection threshold is set as 70 by default; the transmit power is 55% by default. Without fabric concealment, the "receiving" value is around 80, which is greater than the "threshold". With fabric concealment, the receiving value is normally less than 20. If the fabric is too thin, the receiving value will be higher than 20, but it's ok as long as the value is less than the "threshold". In principle, the value should be "10" smaller than the threshold so that the optical sensor can work in a steady state.

Adjust the optical sensor sensitivity on the electronically controlled operation panel shown below according to the following steps:



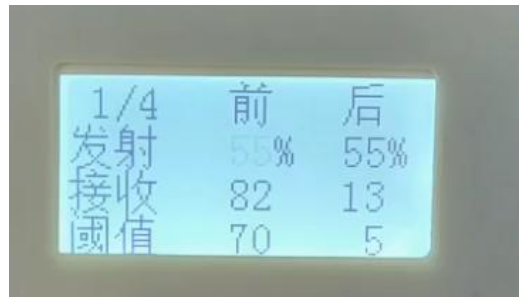
1. Click the button  twice

Click for the first time to enter the fabric selection page. By default, "B: Ordinary" is selected

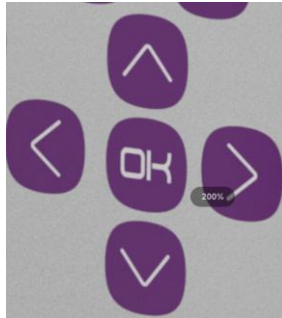


Click for the second time to enter the optical sensor sensitivity adjusting page

Please read the safety instructions carefully fist



Adjust and select the modified parameter items through the "left and right" buttons in the keyboard



Modify the value of the selected item can be adjusted through the "Up and Down" buttons

After the modification is completed, click the "OK" button to save the parameters and complete the modification.