Instructions for

S-3516 computer wire stripping machine

System Features

- Equipped with the latest **32-bit Cortex-M3 processor**, operating at a single-cycle speed of **72 MHz**.
  Capable of achieving **≥70 cycles/min** for cutting and stripping at a wire length of 100 mm.
- Integrated **RS485 communication interface** with **Modbus RTU protocol**, enabling seamless communication with various brands of HMI (touch screens).
  Communication format: **38400, 8, N, 1**
- Highly integrated control system, significantly reducing system failure rates.
- Built-in **large-capacity memory**, capable of storing up to **100 parameter sets**, improving operational efficiency.
- The **wire guide tube is motor-driven**, eliminating the common issue of force attenuation found in traditional solenoid-driven systems, ensuring faster and more reliable operation.
- Multiple optional functional modules available, supporting:
  - **Flat ribbon cable processing**
  - **Sheathed cable processing**
  - **Mid-span stripping (window stripping)**
  - **Inkjet marking**
  - **Printing**

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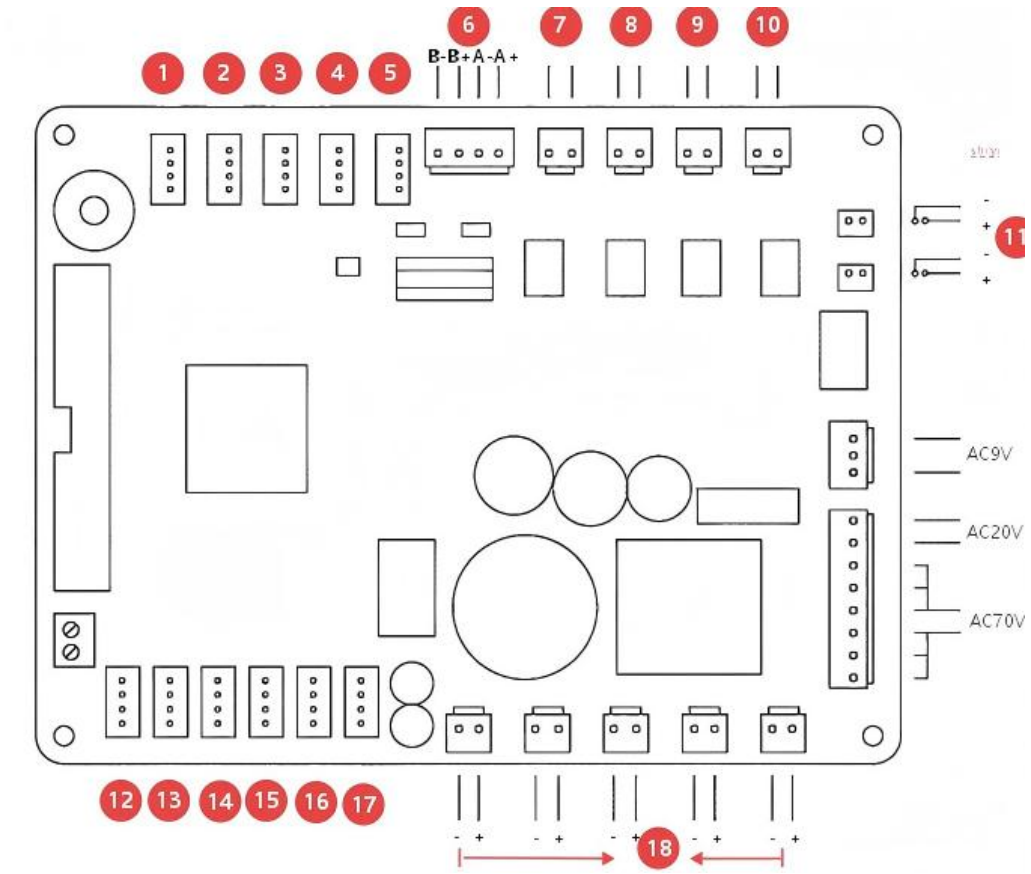
一、Electrical Connection



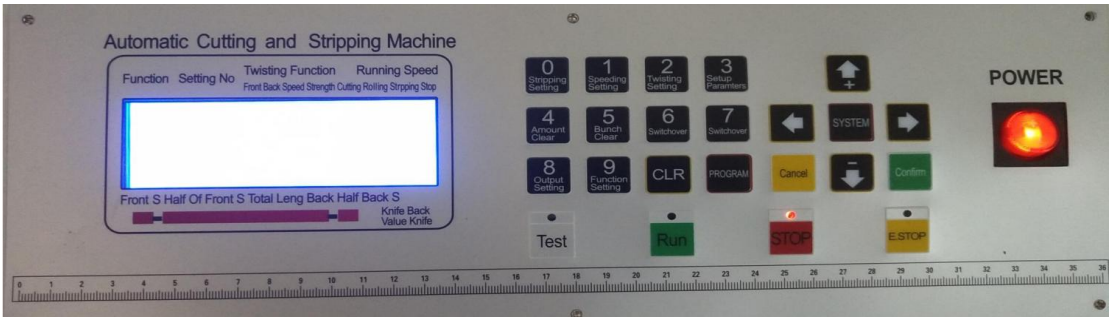
①	Output Feed Roller	⑩	Air Blow Solenoid Valve
②	Blade Holder	⑪	Dual DC 24V Power Supply Outputs
③	Infeed Roller	⑫	Blade Holder Sensor
④	Wire Twisting Unit	⑬	Guide Tube Sensor
⑤	Lift Roller	⑭	Twisting Unit Sensor
⑥	Guide Tube Stepper Motor	⑮	Lift Roller Sensor
⑦	Auxiliary Signal 3	⑯	Reserved
⑧	Auxiliary Signal 2	⑰	Reserved
⑨	Auxiliary Signal 1	⑱	Five-channel DC 120V Stepper Motor Power Output

Notes:

1. Transformer power: **430 VA**
2. Motor drive signal: **5V pulse + direction**, max output frequency **100 kHz** (no current-limiting resistor required)
3. For RS485 communication, ensure **no more than 32 slave devices** on the same bus
4. Always **turn off power before wiring changes** to prevent electric shock

二、Operation Instructions

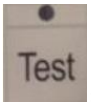
Control Panel Overview



The system interface consists of:

- **23 control keys**
- **192×64 dot matrix LCD display**

The functions of each key are described below：



：In stand by state, every short press, the machine executes a single step, repeated cycle; Continuous press more than 0.5 seconds, the machine will automatically run a cycle; The button in the adjustment of the machine is very important；

：In standby mode, press this button and the machine starts to work；

：In working mode, press this button and the machine will stop after this work；

：In standby state, press this key, the machine will perform the reset action; in working state, press this key, the machine first stop, then perform the reset action；

：Press this key in the data input state, enter the number 0; press this key in the standby state, the machine will enter the stripping parameter setting state；

：Press this key in the data input state, enter the number 1; press this key in the standby state, the machine will enter the stripping speed setting state；

：Press this key in the data input state, enter the number 2; press this key in the standby state, the machine will enter the twist line parameter setting state；

：Press this key in the data input state and enter the number 3; press this key in the standby state and the machine will enter the corresponding function setting screen according to the current function；

：In the data input state, press this key, enter the number 4; press the key in standby mode, clear total amount to 0；

：In the data input state, press this key, enter the number 5; press the key in standby mode to clear all values to zero；

：Press this key in the data input state and enter the number 6; press this key in the standby state to switch the machine working Mode；

：Press this key in the data input state, enter the number 7; press this key in the standby state, switch the machine working Mode；

：Press this key in the data input state, enter the number 8; press this key in the standby state, the machine will enter the output setting state；

：Press this key in the data input state and enter the number 9; press this key in the standby state and the machine will enter the function setting screen；

：Press this key in the data input state to clear the input data; press this key shortly in the standby state to clear the total output and the number to zero; long press this key for 5 seconds in the standby state, so the stripping data back to the factory state；

：In the standby state, press this button, the machine will enter the program number setting state；


：Press this key under the parameter settings, set the lowest bit of the parameter plus 1; press this key under the non-parameter settings, knife value plus 1；


：Press this key under the parameter settings and set the lowest bit of the parameter to minus 1; press this key under the non-parameter settings and the knife value to minus 1；


：Press this key in the parameter setting state, the currently modified data is abandoned, and the last data becomes the modified object; press this key in the non-parameter setting state, Retreating knife minus 1 or enter manually (settable)；


：Press this key in the parameter setting state, the currently modified data is abandoned, and the next data becomes the modified object; press this key in the non-parameter setting state, Retreating knife plus 1 or manually retreat line (settable)；

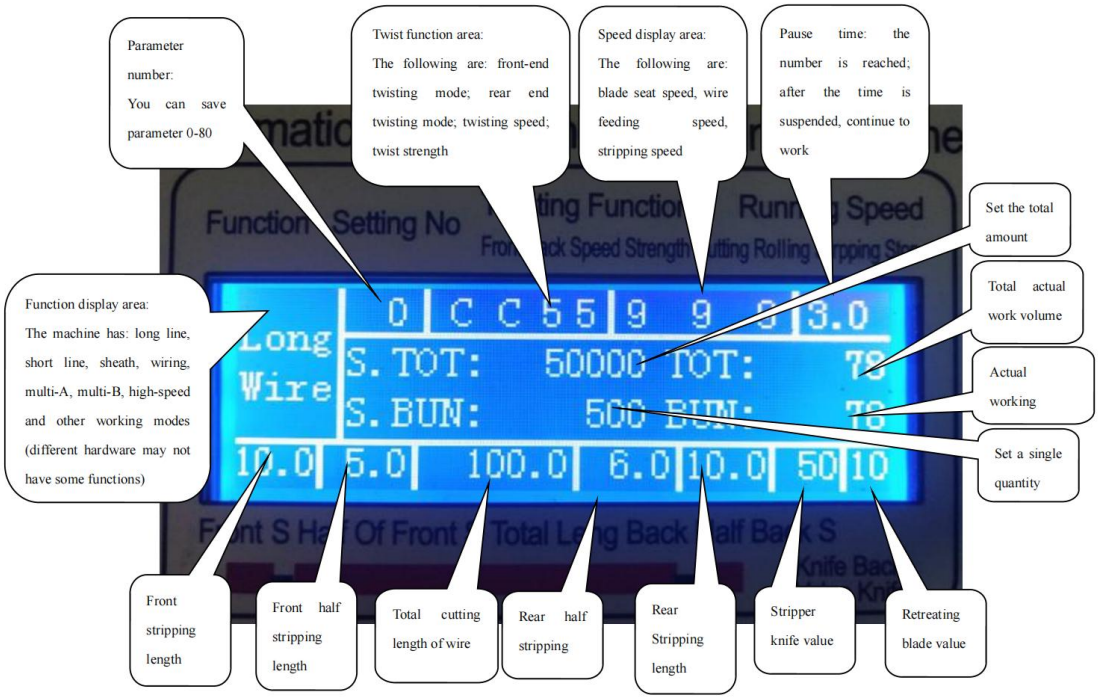
：Press this key in the parameter setting state, and the currently modified data is saved and written to EEPROM, and the next data becomes the modified object；

：Press this key in the parameter setting state, exit the parameter setting state; in the function setting screen, multisection stripping setting screen, system setting screen. Press this button to return to the work screen.

：In the standby screen, press the key to enter the system settings screen, before entering, you need to enter the password; in the function settings screen, multisection stripping setting screen, system settings and other screen, press the key to enter the parameter settings state；

Work menu：

When the machine is powered on, the screen displays the home screen, whichwill be displayed in about three seconds; when the machine starts running, the screen must be on the screen; otherwise, the machine can not start；



Stripping parameter settings：

When the standby machine (no cutting),press this 

key； Front-end length parameters start to flicker, at this point you can directly enter the number, if the input is wrong,you can press the 

button to clear the number has been entered and then re-enter； then press the 

button saved and the next parameter flickers until the front-end length, the front-end half-stripping, the total length, the back-endhalf-stripping, the back-end length, the knife value, and the knife withdrawal are all entered；

parameter setting：

The  button moves the flicker parameter forward one item；  the button moves the flicker parameter backward one item ； and press this 

button the exit parameter can be set at any time to return to standby state；

Stripping speed setting：

When the standby machine (no cutting),press this 

key； The cutter speed parameter starts to blink, and you can enter the number directly,if the input is wrong,you can press the 

button to clear the number has been entered and then re-enter ； then press the 

button is saved and the next parameter flickers until the cutter speed, feeding speed, stripping speed, and pause time are all entered；

parameter setting：

The  button moves the flicker parameter forward one item；  the button moves the flicker parameter backward one item ； and press this 

button the exit parameter can be set at any time to return to standby state；

Output setting:

When the standby machine (no cutting),press this 

key； The total setting parameter starts to blink, and you can enter the number directly,if the input is wrong,you can press the 

button to clear the number has been entered and then re-enter； then press the 

button is saved and the next parameter flickers until the total amount setting and pause time are all entered；

parameter setting：

The  button moves the flicker parameter forward one item；

the  button moves the flicker parameter backward one item ； and press this  button the exit parameter can be set at any time to return to standby state；

Twist setting:

When the standby machine (no cutting),press this  key；Front end twisting mode starts to blink and press  、  button change，then press  button is saved，and the next parameter flicker, until the front-end twist mode, back-end twist mode input is completed, and then press the previous method input twist speed, twist strength；

parameter setting：

The  button moves the flicker parameter forward one item；the  button moves the flicker parameter backward one item；and press this  button the exit parameter can be set at any time to return to standby state；

Program number setting：

When the standby machine (no cutting),press this  key；Program parameter starts to blink，and you can enter the number directly,if the input is wrong,you can press the  button to clear the number has been entered and then re-enter；then press the  button is saved and Return to standby mode ；

Working mode switching：

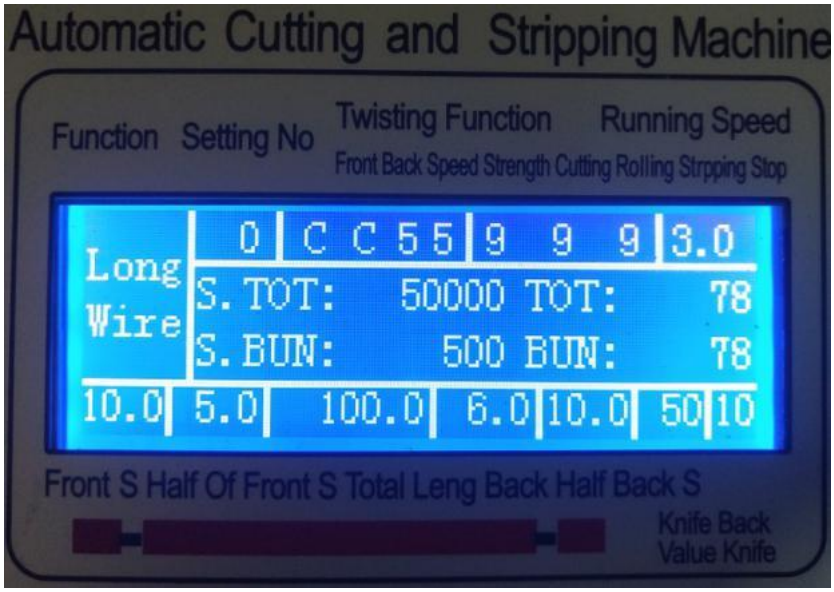
When the standby machine (no cutting),press this  、  key change Working mode；The system has seven working modes: long line, short line, Align line, multi-section A (15), multi-section B (15), sheath (3 layers at each end), high speed (three sets of blades), multi-section C (200)；

Working mode specification：

This machine is a multi-function wire cutting machine. It is dividedinto 7 kinds of cutting and stripping procedures.

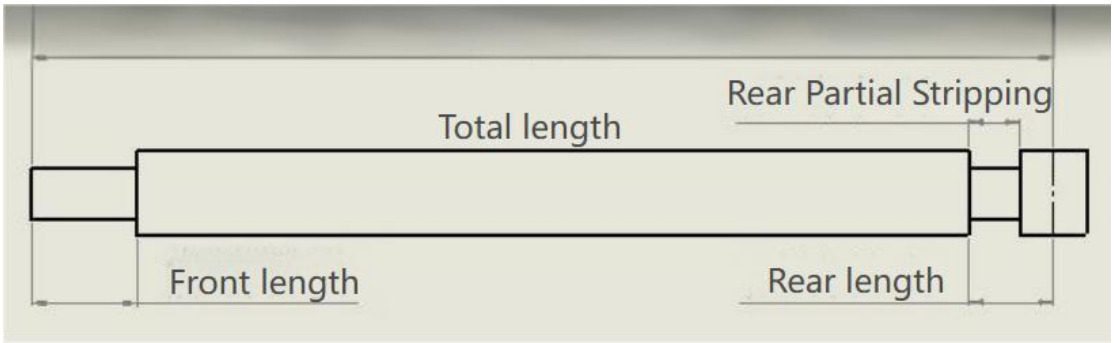
Mode description：

Long line mode：



Press 

key and input the length of the wire to be processed and other information in turn, wire length relationship as follows, and can install twisting device to increase twisting function, just according to the method described above to input the required size；



Under this model press 

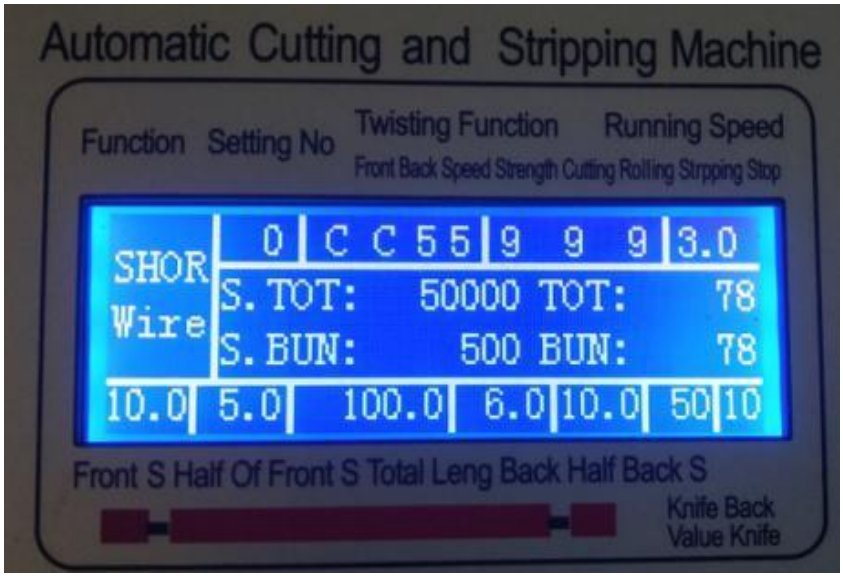
key after entering the "long line function

settings screen", there are two parameters：

1、Twist line lengthening: If the twist line function is turned on in this mode and the length of twist line is less than 6 mm, the length of twist line can be lengthened, and the added length can be cut off after the twist line is finished. It is mainly used as auxiliary when the thread head is too short to twist line, and is set to 0.0 when not used；

2、Cutting times: when the diameter of wire rod is large, it can be cut off several times, and is set to 1 under normal circumstances；

Short line mode：



This mode is basically the same as the long line, but the machine's stripping action is different； and no twist function； Under this model press 

key after entering the "short line function settings screen", there is a parameter：

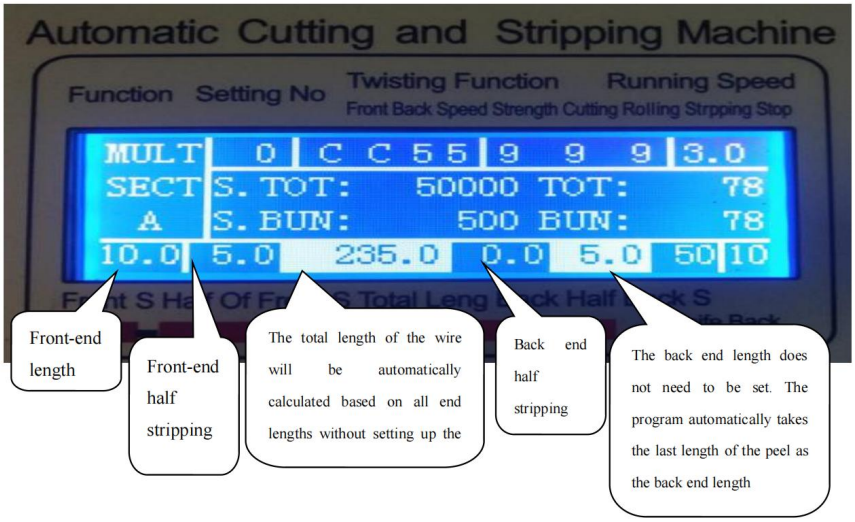
1、Forward push compensation：

The length of the front end may be shorter than the set length when the middle skin of the short wire is longer. This parameter can be set to correct the length. Set it to 0 when not in use；

Short-line action sequence: first peeling (front end length + back end length) - > feeding (total length) - > push skin (back end length) - > cut off.

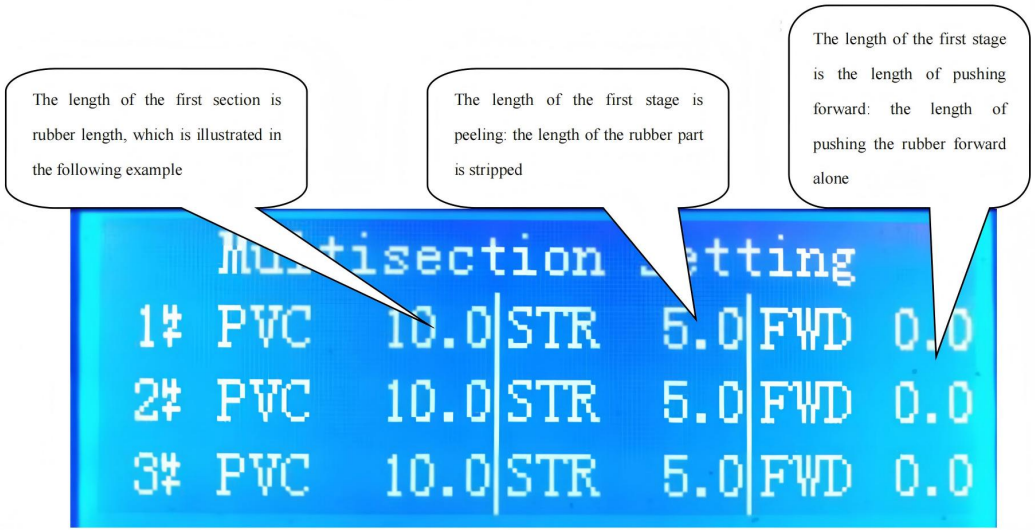
multi-section mode：

Multi segment mode is divided into two parts: A and B;The working picture is shown in the multistage A mode：



This mode does not have the function of twisting; press the 

key function to enter the following line function setting screen：



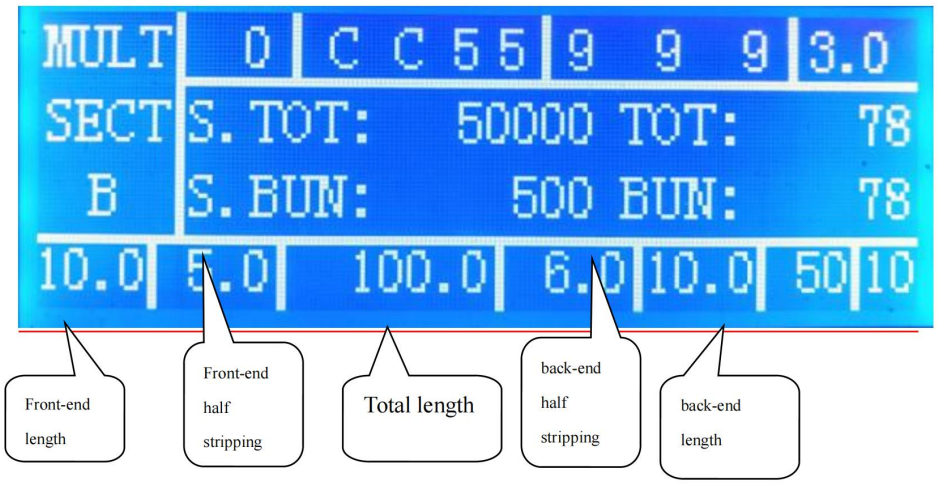
In the non parameter setting state, press the  、  to view the setting parameters of the 1-15 segment up or down； Press the 

button to set up until all parameters are entered；

Note:

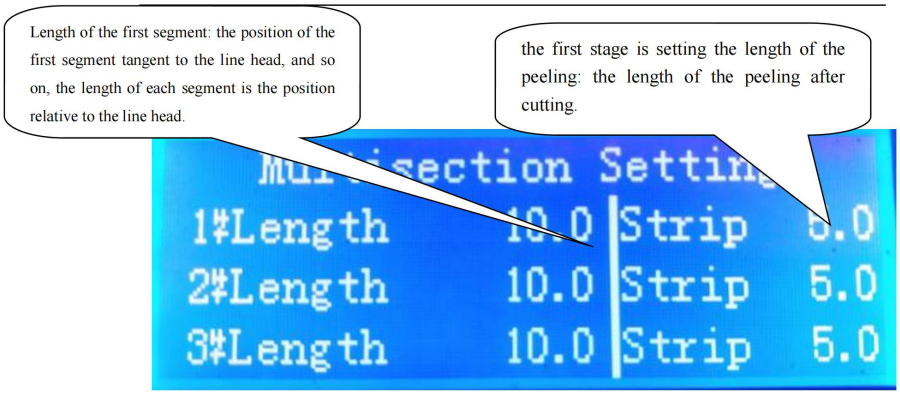
In this multi-section mode, the total length of the wire is equal to the sum of the length of each section plus the length of the front end, the program has been automatically calculated and displayed in reverse, so setting the total length, back end length is meaningless; back end length is the length of the last end! There is no need to set up. When the length of the required segment is set up, the next section is set to 0. In this multi-stage mode, the outlet wheel is not used; it is suggested that the outlet roller can be removed. This mode is especially suitable for wire processing with shorter sections (less than 50mm);

picture is shown in the multistage B mode：



This mode only has the function of back-end twisting (optional); according to the 

key function, enter the following multi functional settings：



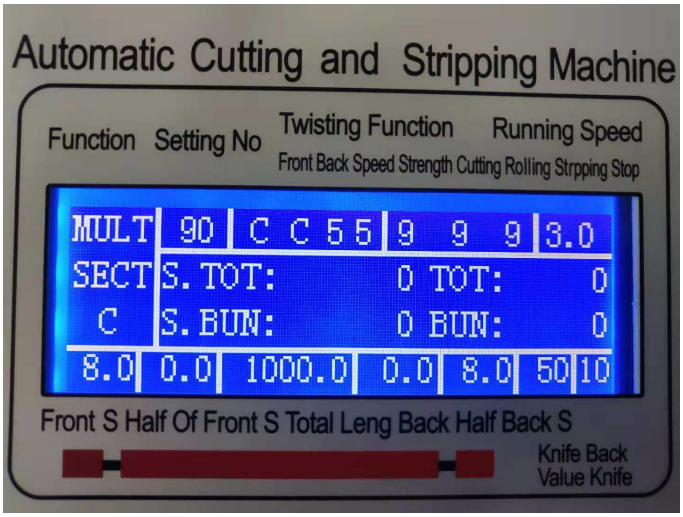
In the non parameter setting state, press the  、  to view the setting parameters of the 1-15 segment up or down； Press the 

button to set up until all parameters are entered；

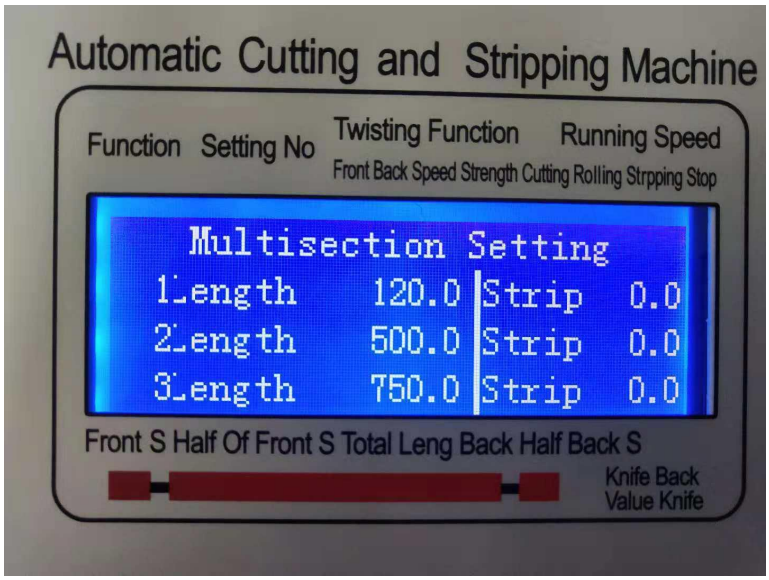
Note:

In this multi-segment mode, when the required length of the segment is set to complete, the next paragraph set to 0 can be! In this multistage mode, the rear end length should be stripped by the outlet roller,

multi-section C mode：



In this mode, a processing tool is installed in front of the feeder wheel, and the program calculates the working order according to the position of the tool and the distance between the tool and the blade； Under this mode, press the 3 Setup Paramters key function to enter the multi-section setting：

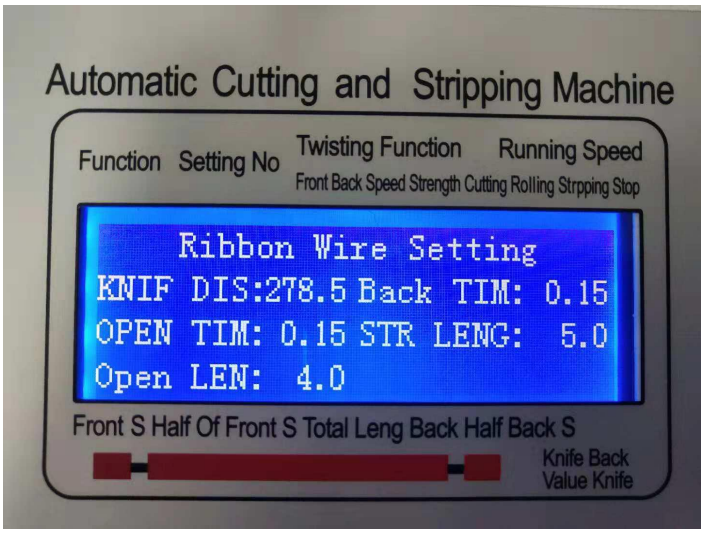


N segment length:

refers to the position processing from the beginning of the wire, each length is calculated from the beginning of the wire.

Shift: refers to a tool stamped once, after moving a certain position again stamping, mainly used when the length to be processed is longer than the length of the tool, for example, when the tool length is 15 mm, and wire needs to deal with 20 mm long, then need to shift 5 mm;

Under the picture, press the 3 Setup Paramters key function to enter the following stages of Setting the middle stripping length.



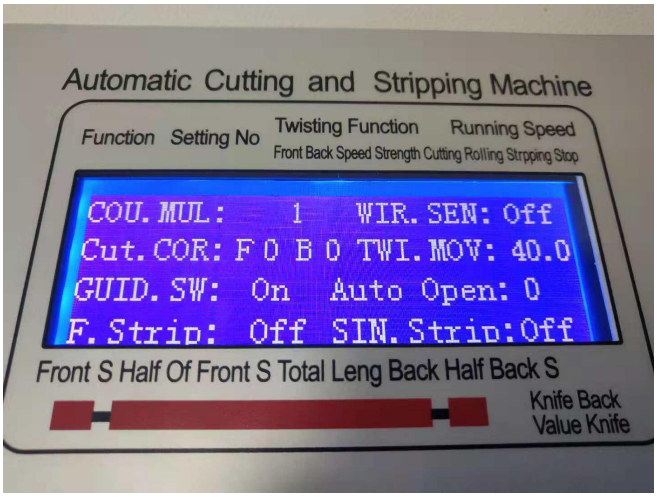
The tool length refers to the effective length of the tool processing, so that the program knows the distance between the two ends of the cutting tool after stamping;

Function setting:

In standby state, press 

button to enter the screen; in the display screen, the machine can not start work, press 

buttons to return to the work screen;



Parameter Settings:

Press 

to start setting until all parameter inputs are complete; the following explains the actual meaning of each function:

Counting multiples:

The multiples that are automatically counted for each cycle of work; if set to 2, the machine works every one time,the quantity add 2.

Wire inspection:

whether to use wire inspection function;

Compensation for knife value:

setting the value of the knife at the front end or back end;

Front twist deviation:

when setting the twist line, after stripping the front end, send to the distance of the twist line wheel; automatic lifting wheel is also useful, when feeding line, if the front end stripping more than the front twist deviation, then will decline, to save the time delay of feeding line;

Catheter switch:

whether to use catheter function; when set to close, the catheter position remains unchanged after the cut-off line, the front wheel retracts the front end line to the catheter to open the back end of the line;

Lifting stroke:

setting the height of automatic lifting wheel, setting the function of closing and lifting wheels at 0 hours (optional function);

Front-end peeling:

whether to use the front-end peeling function, after the front half peeling, the thread head to the rear wheel below, with the rear wheel to roll down the front line skin;

Rear wheel alignment:

After opening, the rear wheel is equipped with eccentric feeder, and the rear wheel is avoided when the front end is stripped, so as to achieve the front end stripping more than 35mm (optional function);

System settings screen：

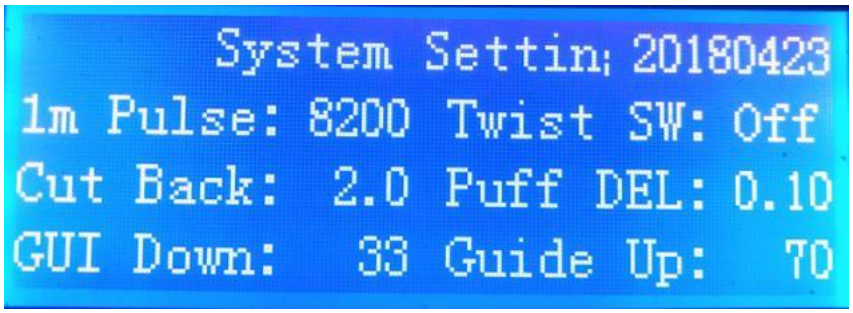
In the standby state, press the 

button to move forward to the screen；

Enter the password 10010011 and enter the screen; when displaying the

screen, the machine can not start work, press 

key to return to the work screen；



One meter pulse：

Set the number of wire feeding impulses of the wire feeder motor when the wire feeder is 1000mm. If the wire is not in conformity with the set wire, this parameter can be corrected appropriately；

Twist function：

turn on or off the twist function; (twist function is optional)；

Cut off back off:

the length of the front end wire after the cutter is cut off；

Blowing time：

set the time of single blow；

Catheter deviation：

Set the catheter in a parallel position, the greater the value, the lower the catheter deviation; the smaller the value, the higher the catheter deviation；

Catheter stroke：

Set the catheter above the position, the greater the value, the catheter deviated upward; the smaller the value, the catheter deviated downward；

Note stripping settings：

1、 Set the number of stripping parameters, the total length must be greater than the front-end length + back-end length; otherwise the machine may run out of control when working；

2、 When using communication to control the machine, it is necessary to ensure that the machine is in the state of displaying working screen and non-parameter setting; otherwise, the communication control is invalid；

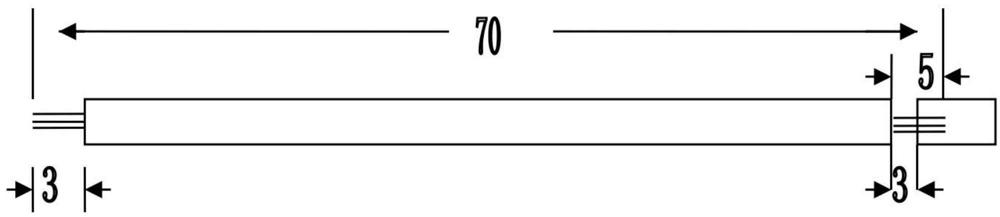
3、 operate at appropriate speed；

4、 In the working screen and non-parameter settings, you can directly press 、 key to set the knife value; press 、 key to set the knife back, without stopping the machine；

5、 If the four button(Test,run,stop,estop) running lights show flashing, indicating the setting parameters is not finish at this time, the machine cannot start；

三、Cutting wire example

（1）Long wire mode



1、 Place the wires in the middle of the rollers, then roll the gap between the rollers until they come into contact with the wire, then move down to 2 grids；

2、 Set size：

⑴ Set the front end length 3;

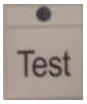
⑵ Set the front half stripping 0;

⑶ The total length is 70;

⑷ Set up rear end half stripping 3;

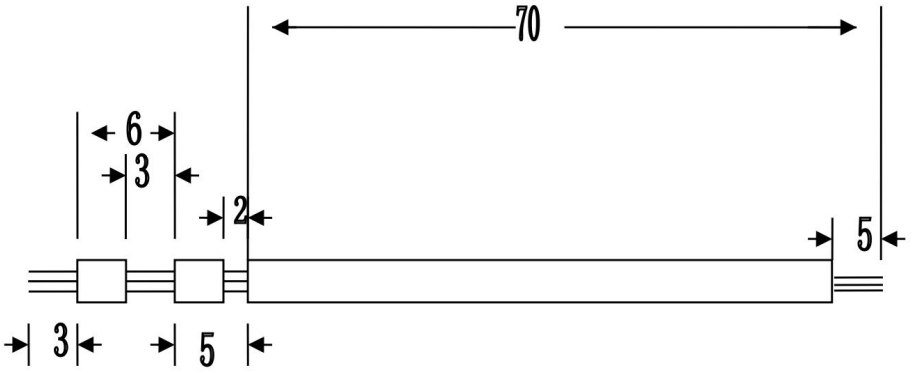
⑸ Set backend length 5;

3、

Press 

button more than 0.5 seconds, the machine will load a line automatically stop, to see if the knife value is appropriate, directly press  、  button to modify; until satisfied with so far；

（2）multi-section mode(multi-section A)

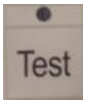


1、 Place the wires in the middle of the rollers, then roll the gap between the rollers until they come into contact with the wire, then move down to 2 grids；

2、 Set size：

(1) Set front-end length 3;
(2) Set front end half stripping 0;
(3) Set 1 segment lengths 3；
(4) Set 1 segment lengths stripping 3;
(5) Set 1 segment forward 0;
(6) Set 2 segment lengths 3；
(7) Set 2 segment lengths stripping 2;
(8) Set 2 segment forward 0;
(9) Set 3 segment lengths 65；
(10) Set 3 segment lengths stripping 5;
(11) Set 4 segment lengths 0；

3、

Press 

button more than 0.5 seconds, the machine will load a line automatically stop, to see if the knife value is appropriate, directly

Press  、  button correction; until satisfied with so far；

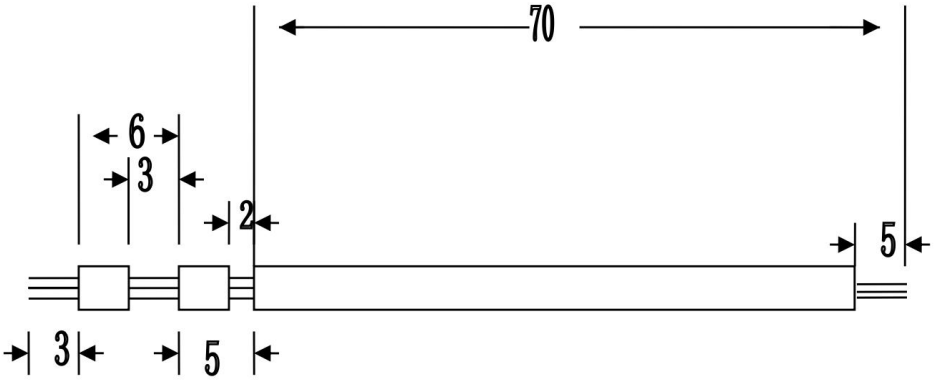
Explain：

1、 If paragraph 4 is set to 0, then the program thinks that you only need to cut 3 paragraphs, and so on; if you want to strip 15 paragraphs, then the length of all 15 paragraphs can be set；

2、 Under the multi section stripping mode, the twist function is invalid；

3、Sometimes, if the wire protection force is large, it may be difficult to push the skin, and the skin peeling mouth is small, at this time can be compensated by setting forward push；

（3）multi-section mode(multi-section B)



1、 Place the wires in the middle of the rollers, then roll the gap between the rollers until they come into contact with the wire, then move down to 2 grids；

2、Set size：

(1) Set front-end length3+3+2=8;

(2) Set front end half stripping 0;

(3) Set total length of 84；

(4) Set back half strip 0；

(5) Set the backend length to 5；

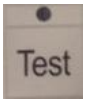
(6) Set 1 segment lengths 9；

(7) Set 1 segment lengths stripping 3;

(8) Set 2 segment lengths 14；

⑼ Set 2 segment lengths stripping 2;

⑽ Set 3 segment lengths 0;

3、 Press 

button more than 0.5 seconds, the machine will load a line automatically stop, to see if the knife value is appropriate, directly press 

、 

button correction; until satisfied with so far;

Explain:

4、 If paragraph 4 is set to 0, then the program thinks that you only need to cut 3 paragraphs, and so on; if you want to strip 15 paragraphs, then the length of all 15 paragraphs can be set;

5、 In multi section stripping mode, twist function is invalid;

Debugging machine skills:

1、 If the length of the stripping edge at both ends is longer or the protective force of the wire glue skin is bigger, the sheath mode can be considered for two or three times stripping; if the length of the front end is 120, the sheath mode can be set, the first section length is 40; the second section length is 80; the third section length is 120; the knife value of the three sections is the same; Similar to the back end, there is no problem with peeling;
2、 If the length of each section is shorter in multi-stage peeling, it is suggested to use the lifting wheel mode, otherwise it is suggested to use the lifting wheel mode;
3、 If the diameter of the wire is large, the stroke of the cutter can be adjusted, otherwise the line may be blocked easily;
4、If the twisting function is inadvertently turned on and the machine does not have a twisting device, the machine can be turned on by pressing the emergency stop + 2 key for a long time, until the machine automatically restarts, the twisting function can be forced to shut down;