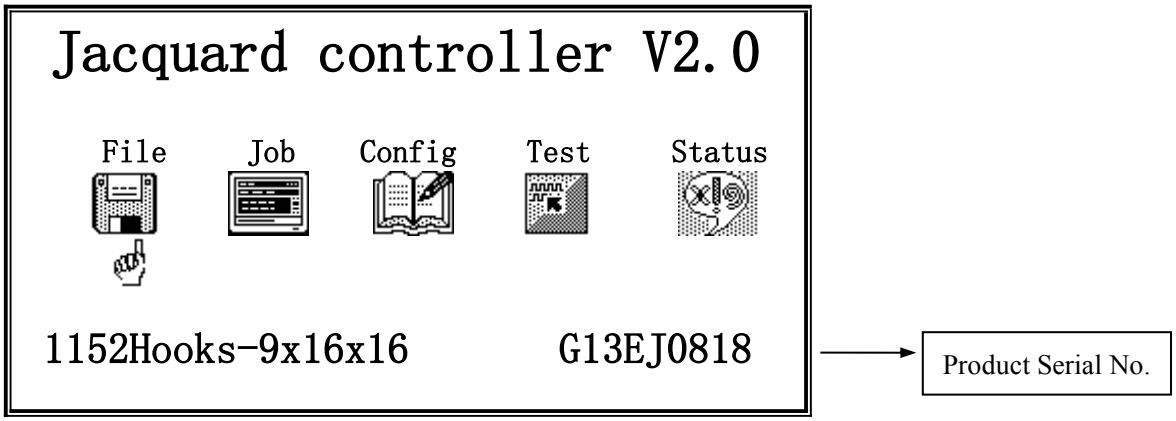
Jacquard controller V2.0

Operation Manual

Regulations and operating environment：

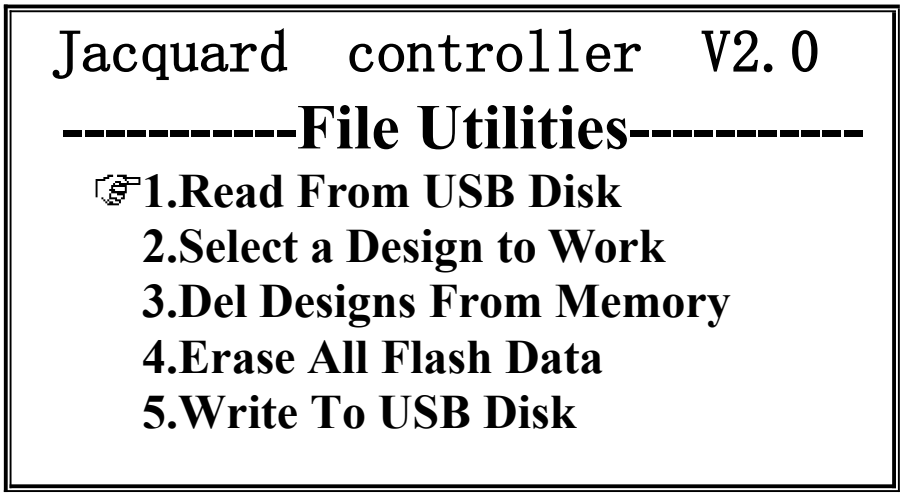
* **Working temperature ……5-40 degree;**
* **Relative humidity ……..…30-95% non condensation;**
* **Power……3 phase 380V±10％, 49.5HZ-60.5HZ;**
* **Earth……..…good grounding，earthing resistance less than 10 ohms；**
* **Water proof.....In accordance with IP54**
* **While you repair or plug connector, you must shut off the power supply to operate.**

（一）Main Windows：



1. **Move the finger icon to select a function by the key of "Up/Down /Left/Right" arrow;**
2. **Press the key of sure "√", then go to the relative function；**
3. **Press the key of clear"×"，then clear the faults such as Data Parity, Oe time out etc.；**

(二）File Utilities：



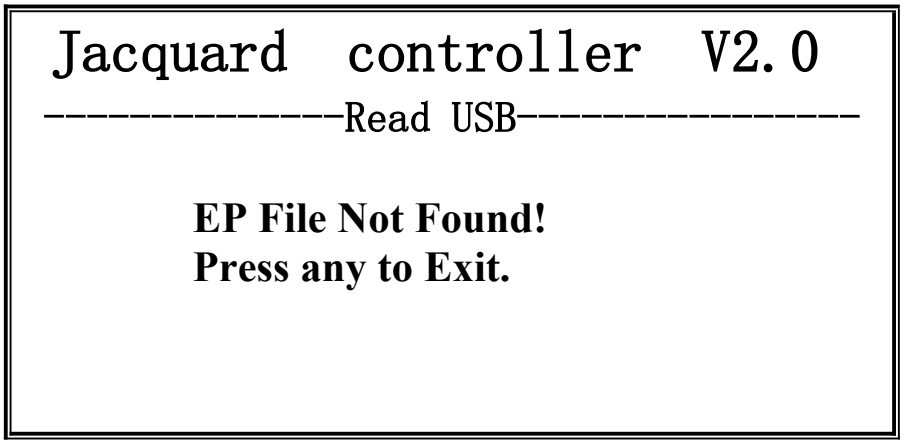
*** Press the key of "Up/Down" arrow to move "☞"icon to one function;**
*** Press the key of "√" to select the function；**
*** Press the key of "F4" to exit to Main Window.**

(A) Read From USB Disk：

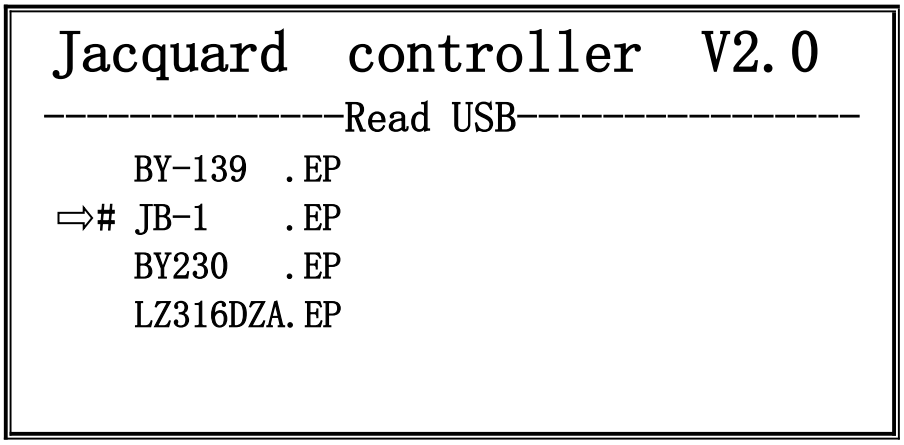
Transfer the design file from USB Disk to Flash Memory inside.

1. **Insert a needed USB Disk, then list all design files in USB Disk；**
2. **If the Usb Disk is not ready, then press any key to exit to the prior window of File Utilities, display the window as follows:**

3. **If there is no file in Usb Disk, then press any key to exit to the prior window of File Utilities, display the window as follows:**

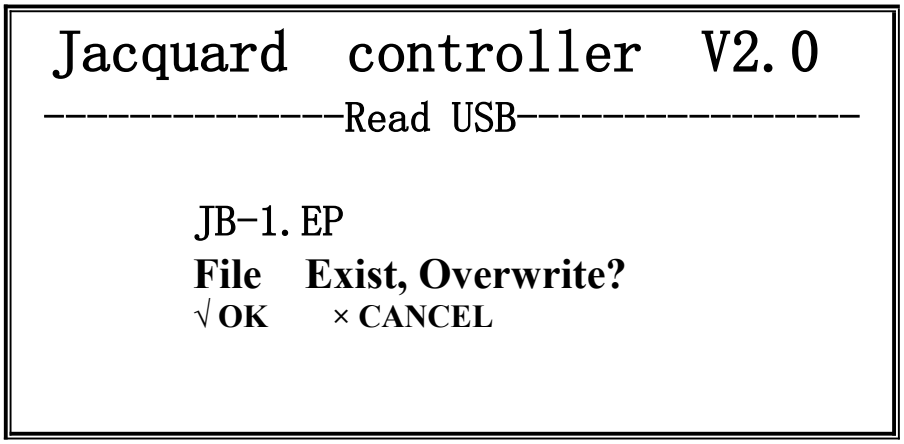


4. **If there is no error, then list all design files as follows:**



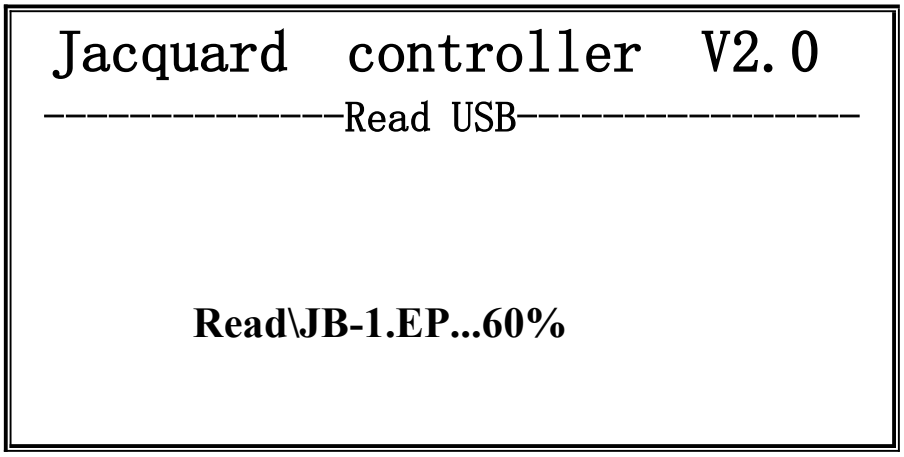
1) Move the right arrow icon(⇨) to the selected design file by the key of "Up/Down" .
2) Press the key of F2 to select the design file, then display the symbol of "#" before the selected design file.
***Press the key of F2 in odd times, display the symbol of #.**
***Press the key of F2 in even times, discard the symbol of #.**
3) Press the key of √ ,If there is not a selected design file,return to the prior window of File Utilities.

4) If there exists a selected design file, then go on.
If the selected design file exists inside, display a window as follows:

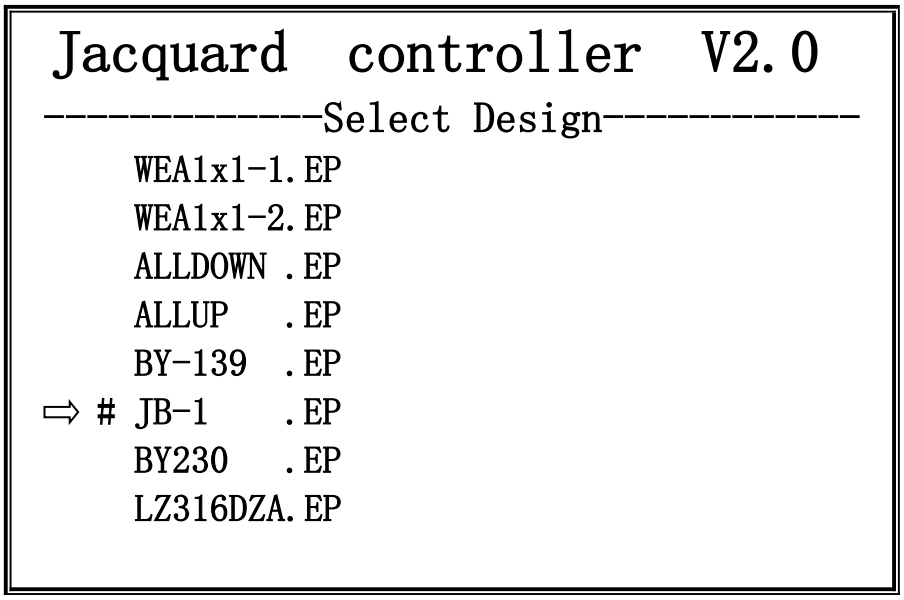


*** Press the key of sure(√), then continue to read design file.**
*** Press the key of clear(×), then return to the prior window.**

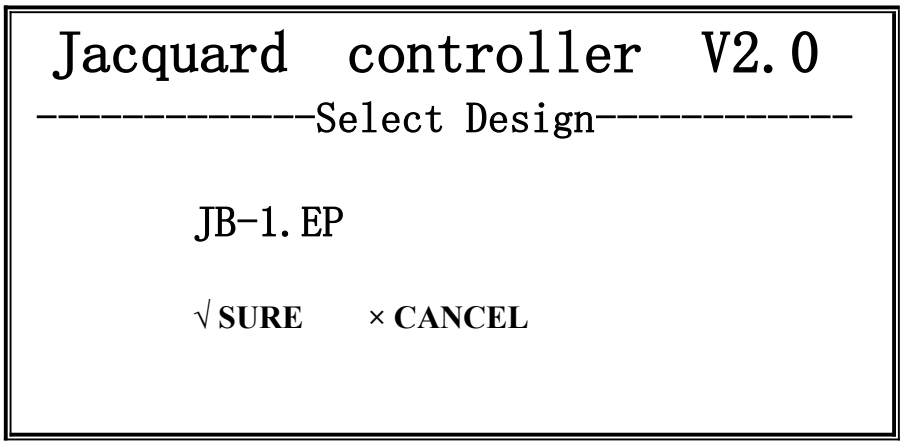
5) If press the key of sure(√), continue to read the selected design file.



(B) <u>Select a Design to Work</u>:

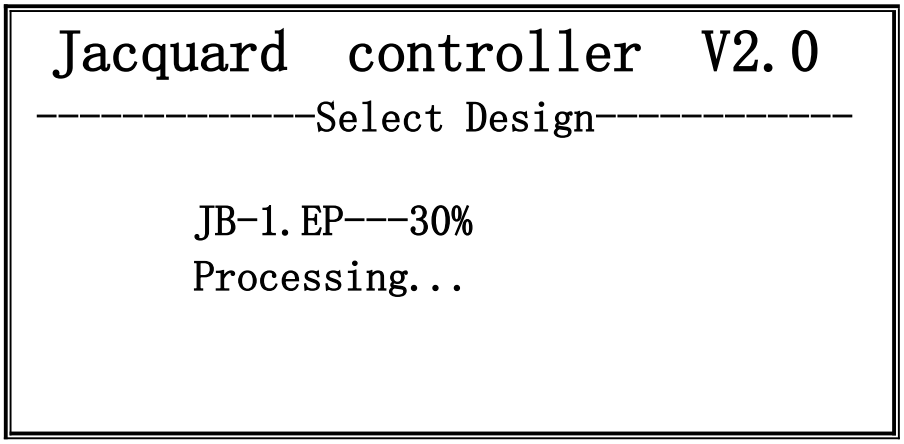


1) Move the right arrow icon(⇨) to the selected design file by the key of "Up/Down" .
2) Press the key of F2 to select the design file, then display the symbol of "#" before the selected design file to work.
***Press the key of F2 in odd times, display the symbol of #.**
***Press the key of F2 in even times, discard the symbol of #.**
3) If press the key of sure(√) , then go to next step.
If press the key of clear(×) or F4, return to the prior window.
4) If press the key of sure(√), select the deisng file to work(weave).Go to next step.



*** Press the key of sure(√), then go to next step.**
*** Press the key of clear(×), then cancel this operation, return to the prior window.**

5) Transfer data of the design file to memory in interface control board.

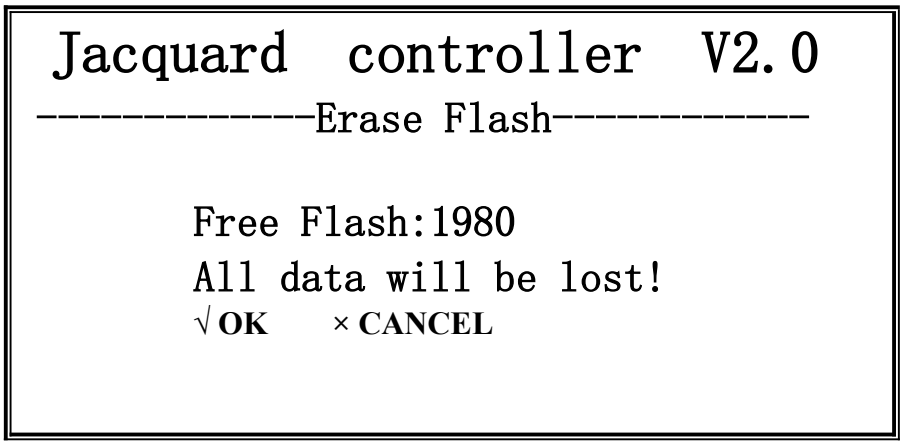


(C) Del designs From Memory:

Delete a design from flash memory inside.
This operation is the same as that of "Select a design to work".

(D) Erase all Flash Data:

This function will make data lost in the flash memory.so you must be carefully before you operate.

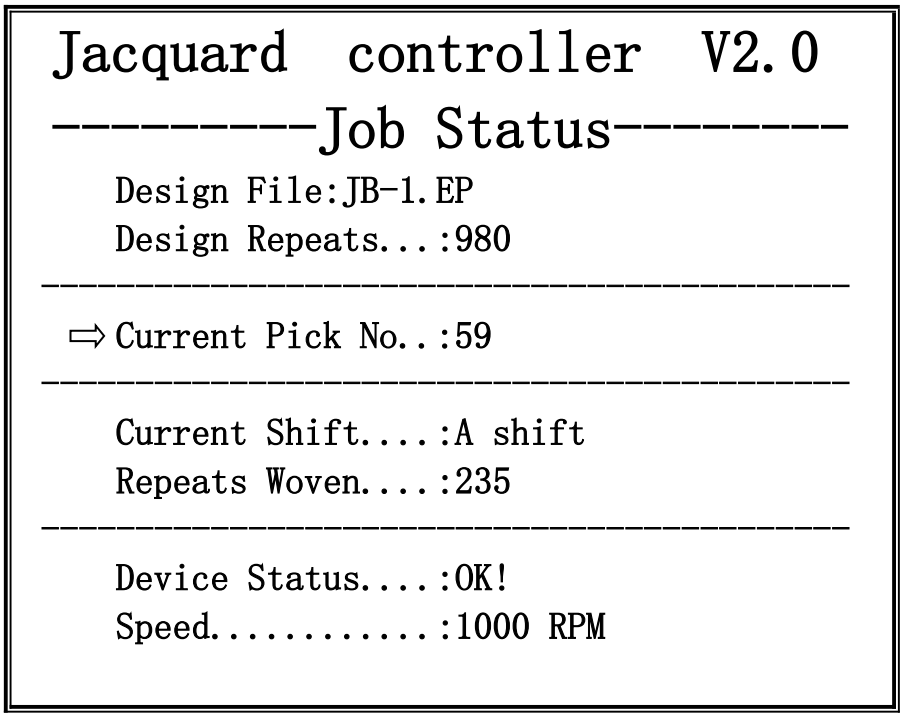


*** Press the key of sure(√), then erase all flash data.**
*** Press the key of clear(×), then cancel this operation, return to the prior window.**

(E) Write to USB Disk:

Select the design file inside to write to USB disk.
This operation is the same as that of "Select a design to work".

(三) Job Status:



1> Move the right arrow" ⇨" to a job-item by the key of "Up/Down".
2> When the key of sure(√) is pressed,there occurs a sparkling cursor.
Then, the key of Up/Down/clear(X) can make the parameter changed.
3> While there is a sparkling text cursor, the key of sure(√) is to turn off the sparkling cursor.
If there is no sparkling cursor, the parameter cannot be changed.

(A) Design file:the current woven design file name.

(B) Design Repeats: the repeats of the current design file.

(C) Current Pick No.:

Under the condition of sparkling cursor:
1> The key of Up is to increase a pick.
2> The key of Down is to decrease a pick.
3> The key of Clear(X) is to reset the pick No. to 1.

(D) Current shift:

Under the condition of sparkling cursor:
1> The key of Up/Down is to select a current working shift among A/B/C shift. The parameter of Repeats Woven is changed according to the current shift.
2> The key of Clear(X) is to reset the Repeats Woven to 0.

(E) Repeats Woven: the output of current shift.

Under the condition of sparkling cursor:
The key of Clear(X) is to reset the Repeats Woven to 0.

(F) Device Status:

This indicates the device status.
If there exists a fault such as data-parity,Oe time-out etc, this item will display "FAULT".
If there is no fault, this item will display "OK".

(G) Speed..:This indicates the machine-weaving-speed in real time.

(四) Config:

```
------------------Config--------------------
    Hooks Number:2560-20x16x32
    Ext. Name of File:EP
    1st Hook Posi....:Left-Back
    OE Time-Limited..:1200 secs
    Hooks Move Dir...:Forward
    Hooks Move Offset:0
    Stop Roller Posi.:17
    Dat Parity.......:Enable
    Flat cables: 20column  1 1 1
         1 2 3 4 5 6 7 8 9 0 1 2
    CT50 V V V V V V V V V V V V
    CT51 V V V V V V V V X X X X


  ⇨Permit:
```

Under the user's permit and machine-not-run, the operation is enable.
1> Move the right arrow"⇨ " to an item by the key of Up/Down.
2> When the key of sure(√) is pressed,there occurs a sparkling cursor.
Then, the key of Up/Down can make the parameter changed.
3> While there is a sparkling text cursor, the key of sure(√) is to turn off the sparkling cursor.
If there is no sparkling cursor, the parameter cannot be changed.
4> Press the key of F4 to exit to main window and save the changed parameters after you have changed some config parameters.

(A) <u>Hooks Number</u>: Jacquard hook number and array.

To change this parameter according to electronic Jacquard real hook number.
Hooks Number: 2560-20x16x16
\||/
Mudule array: 20 columns X 16 rows X 16 warp threads from front to back

Hooks Number: 2560-20x16x32
\||/
Module array: 20 columns X 16 rows X 32 warp threads from front to back

(B) Ext. Name of File: (extend name of file)

1> This is used for Read-From-USB-Disk.
2> This includes the file formats such as EP、JC5;
3> EP is for Bonas.
4> JC5 is for staubli.

(C) 1st Hook Posi...: First(1st) hook position of Jacquard.

1> This decides on the position of the first warp thread.
2> If this parameter doesn't match the real position of warp thread, It occurs that the weaving pattern is incorrect.
3> One of "Left-Back/Left-Front/Right-Back/Right-Front" is selected.
4> The direction of "Left-Back/Left-Front/Right-Back/Right-Front" is defined while the operator faces toward the weaving machine.

(D) OE Time-Limited...: 1200 secs

1> This is to protect the Module from too long time of onloading power and too high temperature.
2> Unit: second.

(E) Hooks Move Dir...:

1> This function of Hooks-Move-direction is to be compatible with the design file format of other factory.
2> This includes "Forward/Backward".

(F) Hooks Move Offset:

This makes the data of Jacquard design file move the offset according to Hooks-Move-Direction(Forward or backward).

(G) Stop Roller Posi.: Generally, In 17 hook position.

The user may change this parameter according to the design of CAD system.

(H) Dat Parity.....:

1> This includes "Enable/Disable";
2> The function of "Enable" checks whether there is a fault or not when interface CPU transfer the data;
3> The function of "Disable" does not check whether there is a fault or not when interface CPU transfer the data
4> If this selects "Enable", system will display the status of the flat-cable in device-status.

(I) Flat cables:

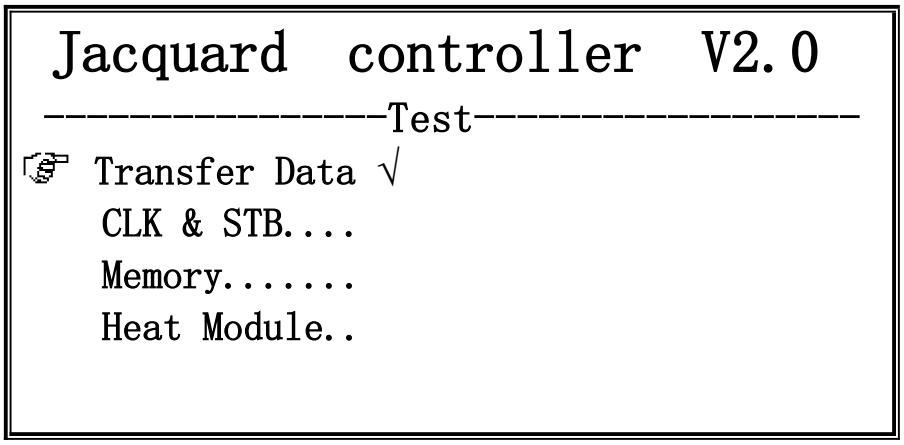
1> This can let user to choose some flat-cables to use.

2> The selected column number is equal to the Jacquard array(Hooks Number).

(J) Permit:

1> The user's operating password is "123678".
2> If the user wants to change some config parameters , you must input the correct password at first.
How to input the password ?
1> Move the right arrow"⇨ " to Permit by the key of Up/Down.
2> Press the key of sure(√) ,there occurs a sparkling cursor. Then, input the correct password(six keys).
3> Press the key of sure(√) to turn off the sparkling cursor. Then you can change some config parameters.
4> During input-password, if you want to exit, press the key of clear(X).

（五）Test:



1> Move the right arrow"☞ " to an item by the key of Up/Down.
2> When the key of sure(√) is pressed,there occurs a symbol of √ after the selected item.
3> The key of F3 is to start test-procedure in odd times.
The key of F3 is to stop test-procedure in even times.
4> During test-procedure, system displays "auto-test…".
5> Press the key of F4 to exit to main window.

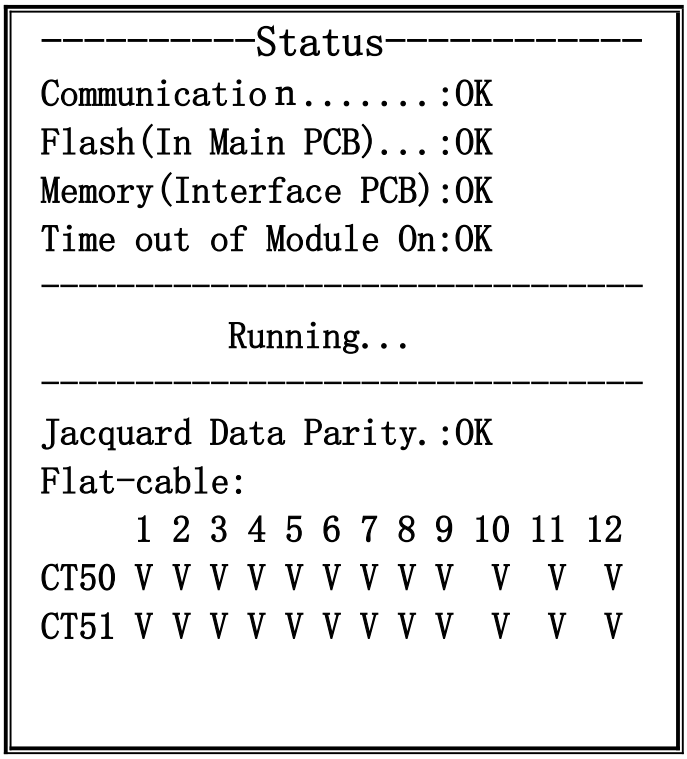
(A) Transfer Data:
***Simulate the machine-running-state to test the reliability of Driver-PCB and flat cables.**
***Press the key of F2 to display the number which is a counter for Jacquard data-transfer-not-reliable times.**

(B) CLK&STB:
To make signals of CLK and STB sparkle every 1 second In Driver-PCB in order to check by user.

(C) Memory:
Test the memory in the interface CPU PCB at front of Jacquard.

(D) Heat Module:
In order to reduce the moisture of module before the machine starts.

（六）Status:



1> Press the key of clear(X) to clear some faults such as data-parity and time-out-of-module-on etc.

2> Press the key of F4 to exit to main window.

(A) Communication.....:

*** This indicates the status of communication between the Main CPU and the interface CPU at front of Jacquard.**

*** We use optical fiber to communicate in this system.**

(B) Flash(In Main PCB)...:

(C) Memory(Interface PCB)...:

This indicates the status of memory in the interface CPU PCB at front of Jacquard.

(D) Time out of Module On:

When the machine stopped, If the time for magnetic modules power on is over OE Time-Limited, Time-out-of-Module-On will display fault and make magnetic modules power off.

(E) Jacquard Data Parity.:

This item indicates fault when system(Interface CPU Board at front of Jacquard) transfers the jacquard data incorrectly.

(F) Flat-cable:

This item indicates the 12 flat cables' status(connected to CT50/CT51/CT52/CT53).

Description of indicator lamps

一、Indicator lamps in control panel：

1) **Auto：**
   It sparkles during auto-test.
2) **Fault：**
   When this system occurs some faults, It sparkles.
3) **CPU OK：**
   The sparkling lamp indicates that the Main-CPU starts to work. Otherwise, the Main-CPU can not start.
4) **Start：**
   It indicates the Weaving-machine-status(Run or stop).
5) **Dat1、Dat2：**
   They sparkle during the communication between theMain-CPU and Interface-CPU.

二、Indicator lamps in main-CPU board：

5VL、3.3VL、2.5VL:
They indicates whether there have the power supply of 5V、3.3V、2.5V or not.

三、Indicator lamps in interface-CPU board：

1）**5V、3.3VL、2.5VL: They indicates whether there have the power supply of 5V、3.3V、2.5V or not.**
2）**12V：the supply of 12V for two sensors.**
3）**V1、V2：sensor indicator lamps.**
4）**OK1：**
   While it sparkles, it indicates that IC24 is working.Otherwise, It indicates that the IC24 does not work well。
5）**ANTI：**
   While it sparkles, it indicates that the weaving-machine is reversing.
6）**COMOK： not used.**
7）**OK：While it sparkles, it indicates that the chip of IC41 is working. Otherwise, It indicates that the chip of IC41 does not work well.**
8）**FAULT: If the interfac-CPU detects some faults, it will sparkle.**
9）**COM-OK：If the communication between the Main-CPU and Interface-CPU is ok, it will sparkle.**
10）**RES0：It sparkles during auto-test procedure.**

一、Output signals:

1、14、2、15、3、16、4、17------》1-8 color selectors
5、18、6、19----------》4 output（reserved）;
1>IRF630 output, low levelavail.
2>12 outputs by the control of proximity switch.
JP1 connect as follows:(JPx-JumPerx)
JP1：1-2 short, not by the control of proximity switch.
2-3 short, by the control of proximity switch.

JP4 connect as follows:
If all eleven outputs are controlled by the proximity switch, Twelfth output may select the control method.
JP4：1-2 short,Twelfth output is controlled by proximity switch.
2-3 short, Twelfth output is not controlled by proximity switch.

7----------》stop roller（IRF630output，low level avail）;

8----------\ Relay output（NO）;
20----------/

9----------\ +24V supply;
21----------/
10----------》signal of proximity switch
22----------》-24(GND);

**** JP2、JP3 is to select the type of proximity switch;**
1-2 short, PNP type.
2-3 short, NPN type.

二、Input signals:

1> Three group input signals （11、23）、（12、24）、（13、25）.
2> 24V level;

3> Active signals:
*** 11、12、13--Negative input;**
*** 23、24、25--Positive input;**
*** JP5、JP6、JP7：3-4 short;**

4> Passive signals:
*** 11、12、13--Negative input;**
*** 23、24、25--Positive input;**
*** JP5、JP6、JP7：2-3 short, 4-5 short;**