External zigzag sewing system (LCD screen) Peripheral test and common troubleshooting
(Ver1.1 2023-2)

1. Can the motor move normally?

A. Press the menu key to enter the menu, and then press the "+" or "-" keys to "equipment test" and confirm;
B. Press the switch key to select the motor option to be tested;
C. Press the "+" key continuously to observe whether the motor rotates;
D. Press the "-" key continuously to observe whether the motor rotates in reverse direction;
E. The above steps C and D are normal, indicating that the motor can work normally.

2. Does the sensor work properly?

A. When the power is off, unplug the motor plug and turn it on again;
B. Then press the menu key to enter the menu, press the "+" or "-" keys to "Equipment Test" and confirm;
C. Push the needle bar left and right, and observe whether there is "L" and "H" alternation in "X zero point";
D. Push the crank of the cloth feeding motor forward and backward, and observe whether there is "L" and "H" alternation in "Y zero point";
E. Turn the hand-wheel clockwise continuously and observe whether "X synchronization" and "Y synchronization" have "L" and "H" alternately;
F. The above steps B, C and D are normal, indicating that the corresponding sensor signal input is normal.

3. How to check the failure of needle-bar swing to the original point?

A. According to the above 2, judge whether the signal of the motor zero return sensor of the pendulum shaft is normal;
B. If step A is not normal, open the upper cover of the machine and observe whether the sensor is on or off when pushing the needle bar left and right. If there is no change, confirm whether the distance and position of the induction iron sheet are appropriate;
C. If there is no problem above, judge whether the motor of the needle shaft is normal according to the above 1;
D. If step C is abnormal, please check whether the motor plug is properly inserted, whether the plug terminal is reliable, whether the motor front axle screw is tightened, and whether the motor wiring is broken;
E. If there is no problem in step D, confirm whether the front axle of the motor can be locked under the power-on state;
F. If there is no problem with A ->F, press the menu key to enter the menu ->system parameters, press the "+" and "-" keys to the No. 3 parameter "X

sensor polarity", press the switch key to jump to the parameter value item, press the "+" and "-" keys to change the value and confirm;

G. The troubleshooting method for the return failure of the feeding shaft is similar to that of the needle shaft.

4. How to check if the sensor indicator does not work?

A. Confirm whether the distance and position of the induction iron sheet are appropriate;

B. Check whether the sensing line is broken and whether the plug terminal is connected reliably.

C. If there is no problem in step B, open the electric cabinet, and carefully check the interconnection wire plug and terminal in the electric cabinet;

D. If A ->C is OK, use a multi-meter to measure whether the 5V power supply of the sensor is normal.

5. How to check if the motor cannot be locked after power on?

A. Check according to steps 3 ->D above, and open the electric cabinet if there is no problem;

B. Carefully check the interconnection wire plug and terminal in the electric cabinet;

C. When the power is on, observe whether the two indicator lights on the power board are on;

D. If steps B and C are OK, observe whether there is any component damage on the stepping board.

6. The motor can only move in one direction?

A. Check whether the machine is stuck or the limit is off;

B. Check according to steps 3 ->D above, and open the electric cabinet if there is no problem;

C. Carefully check the interconnection wire plug and terminal in the electric control box, especially the 3-wire flat wire from the main board to the stepping board.

7. How to check the motor out of step?

A. Check whether the machine is stuck, or the limit is off, and whether the load of the motor is heavy;

B. Check according to steps 3 ->D above, and open the electric cabinet if there is no problem;

C. Carefully check the interconnection wire plug and terminal in the electric cabinet;

D. If there is no problem with step A ->C, press the menu key to enter the menu ->system parameters, press the "+" and "-" keys to the "motor speed" parameter of the corresponding axis, press the switch key to jump to the parameter value item, press the "+" and "-" keys to change the value to below "- 10" and then confirm;

8. How to check if the motor only runs in a straight line?

A. Check whether the motor cannot be locked after being powered on according

to the above 5;
- B. If there is no problem in step A, check whether the X and Y synchronization sensors are normal according to the above 2;
- C. If step B is not normal, open the upper cover of the machine, and continuously turn the hand wheel clockwise to observe whether the X and Y synchronous sensor indicators can turn on and off alternately;
- D. If one or two lights in step C cannot be on or off, align the sensor circuit board with the magnetic ring and try to be close to it.

9. How to reduce the white screen phenomenon on the operation screen?

- A. It is forbidden to insert the plug of the operation box reversely or wrongly;
- B. Avoid static electricity: a. The enclosure and electric control box are well grounded; B. Try to wear anti-static gloves in dry environment; C. When not necessary, avoid touching the electric control box and the wiring outside the box;
- C. Avoid strong electromagnetic interference, which will affect the communication between the operation panel and the electric cabinet

外置型曲折缝系统（LCD屏）
外设测试及常见故障排查

(Ver1.1 2023-2)

1、马达是否能正常运行？
    A. 按菜单键进入菜单、再按"+"、"—"键到"设备测试"并确认；
    B. 按切换键选择要测试的马达选项；
    C. 连续按"+"键，观察马达是否转动；
    D. 连续按"—"键，观察马达是否反向转动；
    E. 上述 C、D 步都正常，说明马达可以正常工作。

2、传感器是否能正常工作？
    A. 在关电状态下，把马达插头拔掉，再开电；
    B. 再按菜单键进入菜单，按"+"、"—"键到"设备测试"并确认；
    C. 左右推动针杆，观察"X 零点"是否有"L"、"H"交替；
    D. 前后推动送布马达曲柄，观察"Y 零点"是否有"L"、"H"交替；
    E. 连续顺转手盘，观察"X 同步"、"Y 同步"是否有"L"、"H"交替；
    F. 上述 B、C、D 步都正常，说明对应的传感器信号输入正常。

3、摆针回原点失败怎么排查？
    A. 按照上述 2，判断摆针轴的马达回零传感器信号是否正常；
    B. 若 A 步不正常，把机器上盖打开观察，左右推动针杆时传感器能否有亮有灭。若没有变化，确认一下感应铁片的距离、位置是否合适；
    C. 若上述都没问题，按照上述 1，判断摆针轴的马达是否正常；
    D. 若 C 步不正常，请检查马达插头是否插好、插头端子是否可靠、马达前轴螺丝是否拧紧、马达的连线是否被压断；
    E. 若 D 步都没有问题，在开电状态下确认马达前轴是否能锁住；
    F. 若 A—>F 都没有问题，按菜单键进入菜单—>系统参数，按"+"、"—"键到 3 号参数"X 传感器极性"，按切换键跳到参数值项，按"+"、"—"键改变值后并确认；
    G. 送布轴回零失败排查方法类似摆针轴。

4、传感器指示灯感应不亮怎么排查？
    A. 确认一下感应铁片的距离、位置是否合适；
    B. 检查一下传感线是否被压断，插头端子是否连接可靠。
    C. 若 B 步没有问题打开电控箱，把电控箱内的互联线插头及端子仔细检查一遍；
    D. 若 A—>C 都没问题，用万用表测量一下传感器的 5V 供电是否正常。

5、开电后马达锁不住怎么排查？
    A. 按照上述 3—>D 步检查，若没有问题打开电控箱；
    B. 把电控箱内的互联线插头及端子仔细检查一遍；
    C. 开电状况下，观察电源板的两个指示灯是否都是亮的；
    D. 若 B、C 步没问题，观察步进板上是否有元件损坏现象。

6、马达只能单向动作？
    A. 检查一下机械有没有卡住，或限位偏了；
    B. 按照上述 3—>D 步检查，若没有问题打开电控箱；
    C. 把电控箱内的互联线插头及端子仔细检查一遍,特别要检查一下从主板到步进板的 3 线排线。

7、马达失步怎么排查？

  A. 检查一下机械有没有卡住，或限位偏了，以及马达的负载重不重；

  B. 按照上述 3—>D 步检查，若没有问题打开电控箱；

  C. 把电控箱内的互联线插头及端子仔细检查一遍；

  D. 若 A—>C 步没有问题，按菜单键进入菜单—>系统参数，按"+"、"—"键到对应轴的"马达速度"参数，按切换键跳到参数值项，按"+"、"—"键改变值为"-10"以下再确认；

8、马达只走直线怎么排查？

  A. 按照上述 5 检查一下马达是否开电后锁不住；

  B. 若 A 步没有问题，按照上述 2 检查下 X、Y 同步传感器是否都正常；

  C. 若 B 步不正常，把机器上盖打开，连续顺转手盘观察 X、Y 同步传感器指示灯是否能交替亮灭；

  D. 若 C 步有一个或两个灯不能有亮有灭，将传感器电路板与磁环的位置对正、并尽量靠近。

9、如何减少操作屏出现白屏现象？

  A. 严禁操作盒插头插反、插错；

  B. 避免静电：a、机壳及电控箱良好接地；b、干燥环境下尽量带防静电手套操作；c、没有必要时，避免无关的触摸电控箱及箱外连线；

  C. 避免强电磁干扰，影响操作屏与电控箱之间通信。

本文档若有更新恕不通知，任何技术咨询，请致电 0755-27513737 获得支持。

ShenZhen XJY science and technology limited company

If have update this document will not be informed, any technical question, please contact 86-755-27513737 for support.