Dynapos

TECHNICAL MANUAL

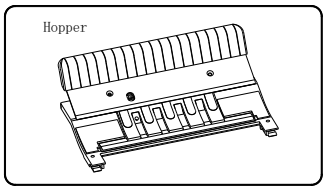
BC1020-M

www.dynapos.com.ar

1. Main parts and function introduction

1.1 hopper：

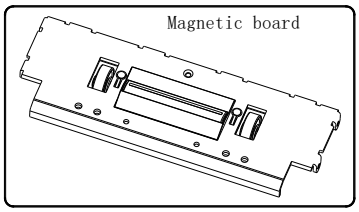
Using as bracket for bills loading, bills run smooth when the gap of hopper and feeding roller is proper. The machine operates while the feeding sensor incept anything.



1. 2 magnetic board

Structure of bill counter's sensor passing,

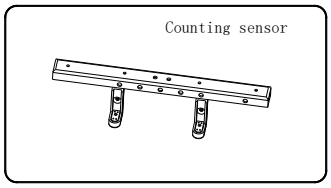
The main magnetic head is used to detect whether the detected bill has magnetism printing ink or if the bill' safety line has magnetic element(this function only suits for models with UV/MG), therefore, the non-magnetic note doesn't work with MG-detect machine. There is an proper gap between the rotated roller on the magnetic board and impeller， which pulls note out from hopper when machine operates ,so that note finish its passing work.



1. 3 UV assembly

Using the law of refection, ultraviolet radiation

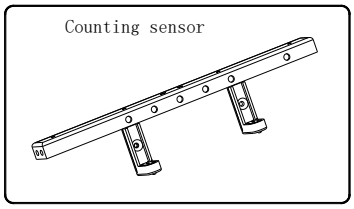
from two UV bulbs goes through the note to silicon cell, the model can check out the UV element notes after the cell got the signal and systems analysis(this function only suits models with UV/MG)



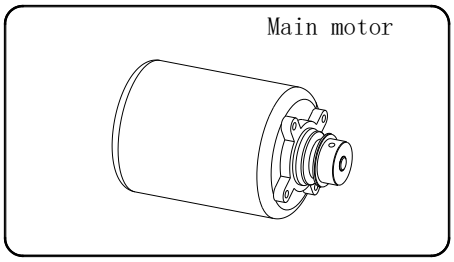
1.4 counting sensor

This counting sensor installed two IR receiver,

emit the IR signal by two IR launch from magnetic board, then according to the changing of voltage in the period of notes passing, the machine can count note accurately.



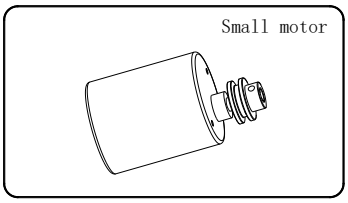
1.5 main motor



It is the heart core of the whole machine's operating. The system sends out instruction of start or begin to make the machine operate while the hopper sensor working.

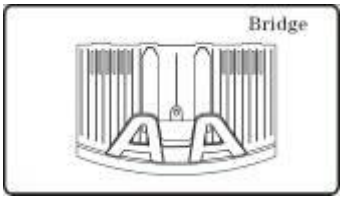
1.6 small motor

It used as transmitting device, The system sends out instruction of start or begin to make the machine running while the hopper sensor working. It will take in the notes which pass from magnetic board, then transmit to frontal-platform.



1.7 Stacker

The stacker as well as the block board form frontal-platform. All the passing notes gather here so that it's convenient to tidy away.



2. INNER SETTING PROGRAM

2. 1 Automatic & Manual counting.

Press the "SET/-1" button for 3~5 seconds to enter program setting, it will appear "OP-A" , press "FUNC" to change the item to be "OP-E", then press 'MOOD" to choose 'YES"(automatic counting) or "NO" (manual counting), after choosing the level, press "RESET" to keep the new program.

2.2 UV sensitivity adjustment

--There are 10 level of UV sensitivity for selection, Hold press ”SET/-10” button for 3-5 seconds, the counting display window shows “OP-A”, batch display window shows one digit of the number”OFF,01,02….10”, press the button “MOOD” to select ‘UV’ sensitivity as you want, After select the right value, press” RESET” to keep the data.
--The bigger number means the higher sensitivity you set and “OFF” means deactivate this detection function.

2.3 MG sensitivity adjustment

-- There are 3 level of UV sensitivity for selection, Hold press ”SET/-10” button for 3-5 seconds, the counting display window shows “OP-B”, batch display window shows one digit of the number”OFF,01,02,03”, press the button “MOOD” to select ‘MG’ sensitivity as you want, After select the right value, press” RESET” to keep the data.
--The bigger number means the higher sensitivity you set and “OFF” means deactivate this detection function.

2.4 Size detect function ON/OFF

-- There are 3 level of UV sensitivity for selection, Hold press ”SET/-10” button for 3-5 seconds, the counting display window shows “OP-B”, batch display window shows one digit of the number”OFF,01,02,03”, press the button “MOOD” to select ‘MG’ sensitivity as you want, After select the right value, press” RESET” to keep the data.
--The bigger number means the higher sensitivity you set and “OFF” means deactivate this detection function.

2.5 False money counted ON/OFF

Hold press False money can counted as one PC or not, Hold press ”SET/-10” button for 3-5 seconds, then press the “FUC.” One by one till the counting display window shows “OP-U”, press “Mode” to choose YES/NO as you want.

3. Adjustment explanation.

3.1 hopper and feeding roller adjustment

(1) method of adjust the gap between hopper and feeding wheel:

Too large gap between hopper and feeding wheel can make counting un-accurate owing to note passing un-smoothly, notes links or notes blocked. By contraries, notes will be tore because of too tight gap.

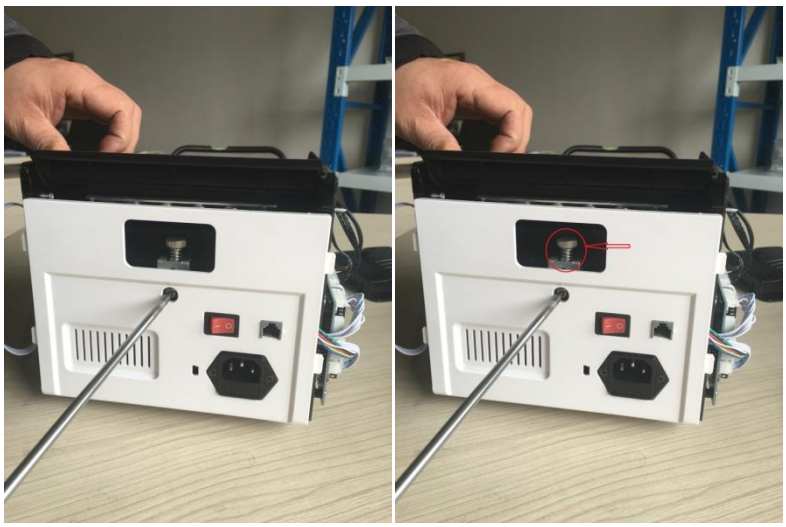
Step 1: hold one note to test left side of the gap between the hopper and 3 feeding wheel, it should not be too loose or tighten. (machine need running)

Step 2: hand cover the start sensor, let the machine keep running, then hold one note to test right side of the gap between the hopper and 3 counting wheel, it should not be too loose or tighten.

NOTE: the gap of both size should in balance, otherwise will cause money tilt coming down, will cause counting Error.

3.2 Adjust up and down gap of the hopper:

Adjust a proper up and down gap between hopper and feeding roller according to turning the bill adjustment wheel if feels too loose pull. Turn it right to decrease the thickness ， Turn it left to increase the thickness .

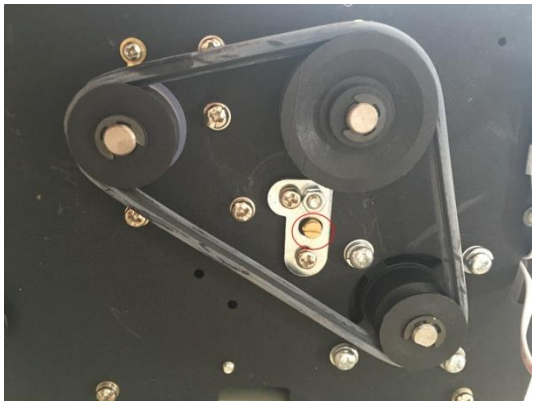


3.2 Adjust the gap of left and right of the hopper:

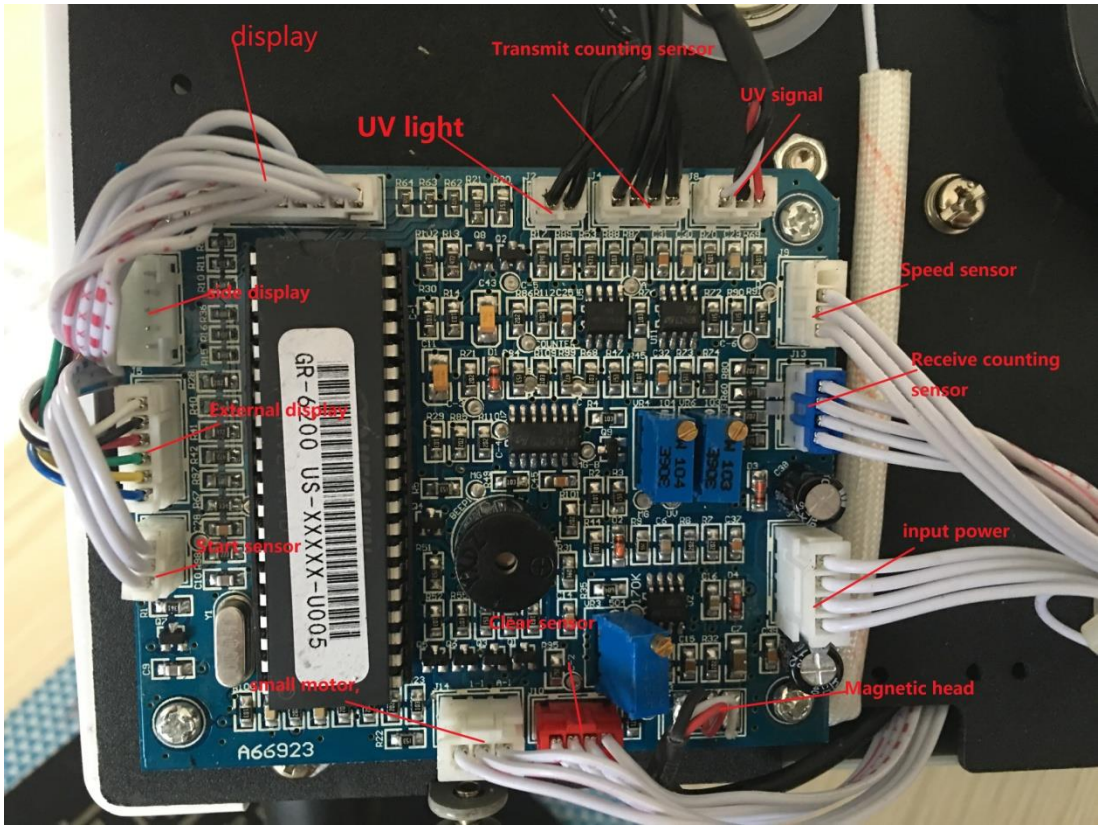
Adjust the balance of the left and right hopper by turning the adjusting side screw, when you find it’s the pull of left and right is different.

Step1:Take off the top cover.

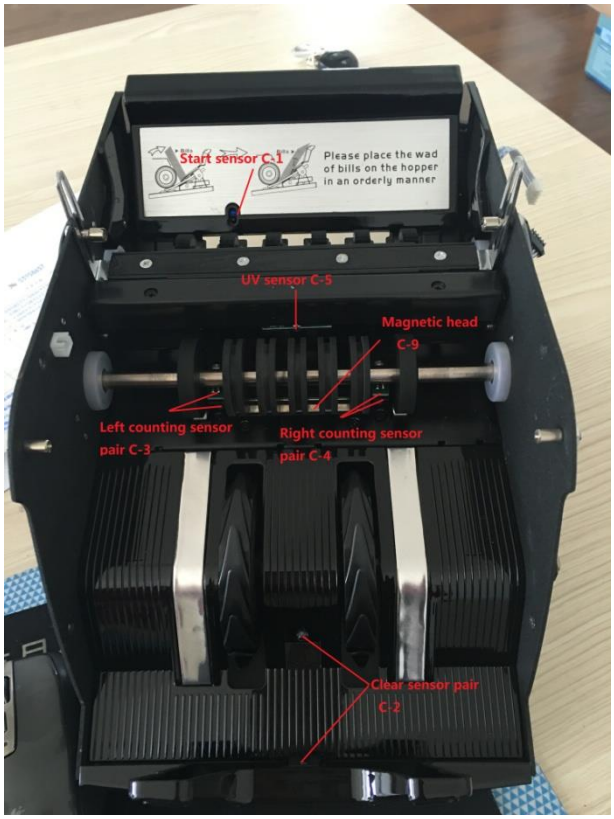
Step2: Adjust the side screw follow arrowhead increase the right parts of the hopper, decrease the space between hopper and feeding bill wheel increase the pull; on the opposition ,increase the space , decrease the pull.

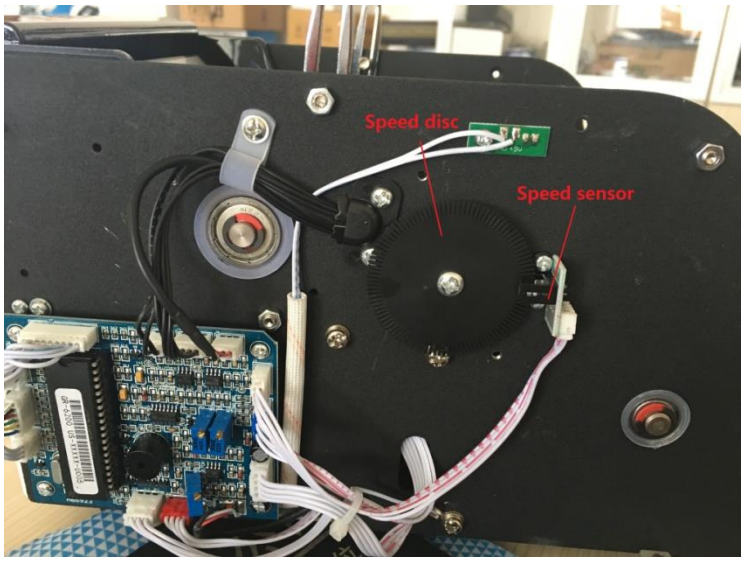


3.3 plug board and electronic program



4. Sensor position:





5. Error and Solution:

5.1 Self checking (Error appear when switch on machine)

1. C-1（Start sensor）

Matter analysis: clearance sensor has dust blocked or been destroyed; Solution:

a) clean the sensor or replace it

above-mentioned has no problem, please maintain or replace circuitry board.

2. C-2（clearance sensor）

Matter analysis: clearance sensor has dust blocked or been destroyed; Solution:

b) clean the sensor or replace it

above-mentioned has no problem, please maintain or replace circuitry board.

3.C-3 (left counting sensor) or C-4 (right counting sensor)

Matter analysis:

a). left/right side counting sensor problem or get dirty .

b). left/right up and down counting sensor without alignment.

Solution :

a) adjusting the counting sensor, so that the upper sensor face directly to the nether sensor.

b) clean the sensor or replace it

above-mentioned has no use, please maintain or replace circuitry board.

4. C-5 (UV sensor)

Matter analysis:

a)UV sensor problem or get dirty .

Solution :

a)clean the sensor or replace it

above-mentioned has no use, please maintain or replace circuitry board.

5. C-6 (Speed sensor)

Matter analysis: Main motor’s driver strap ruptured or fallen off, or it destroyed ; the speed sensor has blocked dust; improper voltage of speed sensor.

Solution:

a) replace main motor or driver strap

b) clean the speed sensor or replace it

above-mentioned has no problem, please maintain or replace circuitry board.

5. C-9(Magnetic sensor)

Matter analysis:

a) interfere from magnetic head

b)Magnetic electronic circuit has problem .

Solution:

c) replace the magnetic head .

d) check the connection between MG head and main board, if well ,then replace main board

5.2 Counting error

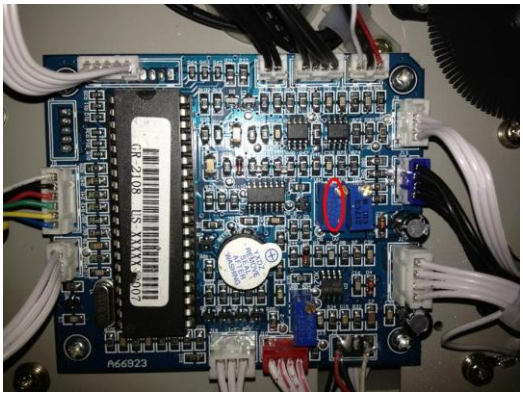
1. Original note alarm E-2 (UV)

Matter analysis: exorbitant sensitivity or extra light state; heavy UV voltage

Solution:

a) Low proper UV sensitivity on the setting program OP-A

b) If adjust UV sensitivity is not use , then adjust proper UV voltage on the main azboard.



Adjust the VR4 potentiometer till original note pass well but A4 paper need catch.

c) above-mentioned has no problem, please maintain or replace circuitry board.

2. Original note alarm E-3 (MG)

Matter analysis: magnetic head or function console harmed:

too big gap between magnetic head and speed sensor; exorbitant sensitivity; conjunctive line of magnetic head fallen.

Solution:

a) check magnetic head , connect wire well or not, replace it if been checked problem

b) adjust proper MG sensitivity much lower by setting program OP-b

c) adjust 0.2mm gap between magnetic head and pressing ruble wheel. (one note feel loosing, 2 notes feel little tighten)

d) above-mentioned has no problem, please maintain or replace circuitry board.

3. Original note alarm E-1 (half note)

8.6.1 Matter analysis: Counting sensor damaged or voltage instability;

Solution:

a) replace the counting sensor.

b) above-mentioned has no problem, please maintain or replace circuitry board.

4. Original note alarm E-8 (double note)

8.7.1 Matter analysis: Alarmed note color is too dark, dirty ;Counting sensor damaged or voltage instability;

Solution:

a) replace the counting sensor

b) above-mentioned has no problem, please maintain or replace circuitry board.

5.3 Other problem

1. Error message: start sensor doesn’t work after startup.

Matter analysis: choosing manual start; start sensor line fallen; too tight hopper or notes blocked;

start sensor destroyed ; relative circuitry problem.

Solution:

a) check whether choosing manual start.

b) check whether start sensor has too dust or plug fallen.

c) check the start sensor , replace it if been checked with problem.

d) above-mentioned has no problem, please maintain or replace circuitry board.

2. Error message: main motor doesn't work small motor working.

Matter analysis: it's strap fallen or broken; main motor destroyed; too tight hopper or notes blocked; motor's connecting line fallen; relative circuitry problem

Solution:

a) check hopper gap. check main motor's signal line if it has fallen.

b) when switch on the machine main motor can running, the capacity is damaged .

c) When switch on the machine motor can not running, replace the main motor.

d) above-mentioned has no problem, please maintain or replace circuitry board.

e) If big motor just shock but not running, replace the power board.

3. Error message: small motor doesn't work after startup

Matter analysis: it's strap fallen or broken; small motor destroyed; too tight hopper or notes blocked; motor's connecting line fallen; relative circuitry problem

Solution:

a) replace small motor strap

b) install it again

c) maintain or replace small motor

d) if the receiving wheel not running when switch on machine, check the small motor.

4. Error message: no display message after press power switch

Matter analysis: improper power plug connecting; fuse burned out; input and output transformer plug fallen.

Solution:

a) check whether power input is consist with model's, or power supply line has fallen

b) replace fuse

c) check whether AC adaptor has fallen

d) check whether input and output transformer plug has fallen

e) above-mentioned has no problem, please maintain or replace circuitry board.

5. Error message: Led short display some information

Matter analysis: LED/LCD has destroyed; LED/LCD, IC has destroyed.

Solution:

a)change LED/LCD board.

b)replace main board.

6.Error message: disorder message or keep on humming after startup

Matter analysis: chip damaged or transistor damaged.

Solution: replace main board and transistor.

7. Error message: slow speed of main motor or shaking

Matter analysis: control circuitry of main motor has problem or motor has destroyed.

Solution: replace motor or main board.

8. Error message: missing size deviant

Matter analysis: speed sensor destroyed or heavy dust; inaccurate voltage; in accurate voltage of counting sensor; no width detection or too low sensitivity

Solution:

a) replace sensor or clear it

b) checking when machine is working

c) adjust size sensitivity.

9.Error message: UV deviant

Matter analysis: too much dust on surface of silicon battery; battery destroyed or UV lamp has problem; low sensitivity; relative circuitry problem.

Solution:

a) clear glass

b) replace silicon battery or UV lamp

c) adjust higher UV sensitivity .

d) adjust proper UV voltage .

e) please replace or maintain main board if model still doesn't work.

10. Error message: notes blocking

Matter analysis: too tight gap between big magnetic head and speed sensor; metal things blocked in hopper.

Solution:

a) adjust gap between magnetic head and speed sensor

b) pick out blocked things after open up cover

11. showing E-5 with real note

Matter analysis: low sensitivity of size； inaccurate IR voltage

Solution: replace the counting sensor or change main board.

12. Error message: buzzer keep on humming

Matter analysis: buzzer has problem

Solution: replace buzzer

6. replace problem parts

1. replace rubber tongue

a) open back cover.

b) pull hopper out, and it's connecting line.

c) handle the hopper tight to make it turn up, replace a new rubber tongue.

d) install the connecting line, then put hopper back, after connect power.

2. replace feeding sensor

a) operate according to step as 1.

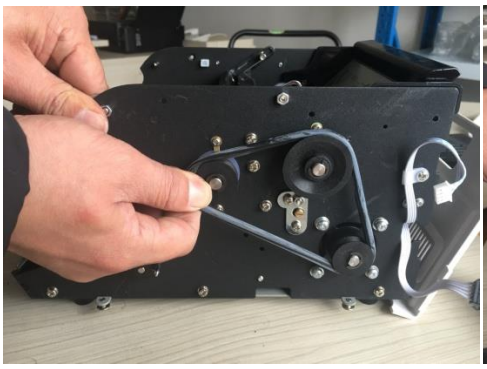
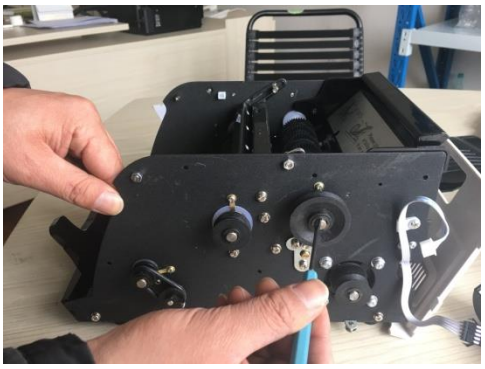
b) replace unload the feeding sensor by new one, then install it.

c) operate according to in 1.

3.replace feeding roller

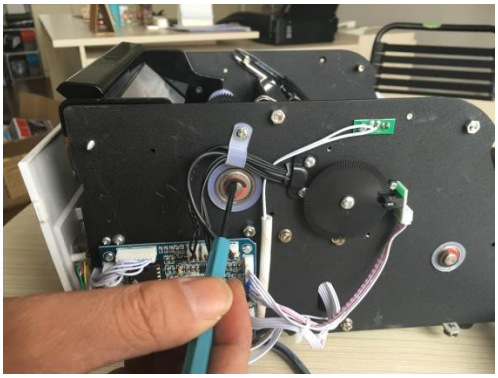
a) unload left and right cover first, pick out main motor strap.

b) take off the connecting piece and screws in the earth, then unload main board.

c) press out the lock spring local on the left feeding bearing by small “-” shape screwdriver, then unload the plastics roller.\

d) Press out the block which is on the bearing by small“+” screw driver, if necessary, it can be tapped out.



e) Press out lock spring which is in left side feeding bearing by small “-” screwdriver, then take off the screw on the sides of the bearing .

f) Push out the bearing , take out the hopper.

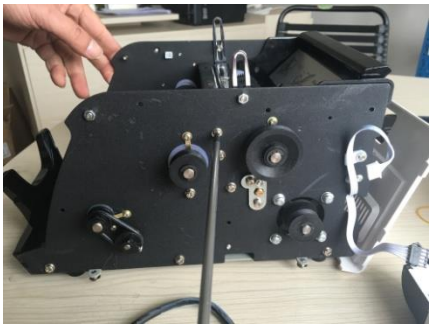
g) Replace the hopper, and fix up bearing ,fasten the screw, and recover all the parts as them are.

h) Fix up the main motor cincture, main board, and then fix all the sensor on the main board, make sure all have been connected correctly ,then power on and adjust the hopper.

I) Fix up the sides covers then over.

4. replace the UV assembly

a) Take off the left cover, then take off the up cover,



b) Take off the jack of UV assembly, take out the plastic cover, pull the connector.

c) Turn up the UV assembly right side by "_"shape screw driver, take off the screw on the UV assembly. pull out the connecting line .

5. Replace the speed sensor

a) Open the left cover, loosing two screw , take off the dust cover,

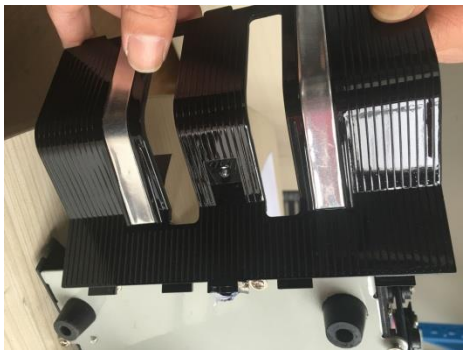
take off the screw as picture by "+"screw driver, recover all the parts connect the power and test.



6 Replace the clearance sensor

a) Open the left and right sides covers, Disconnect the clearance sensor.

Pull the impeller upside.

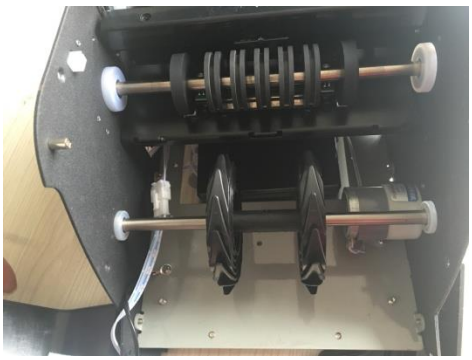



b) Take out the impeller by 5.5mm spanner.

c)Turn over the impeller, take off the screw as, change the clearance sensor.

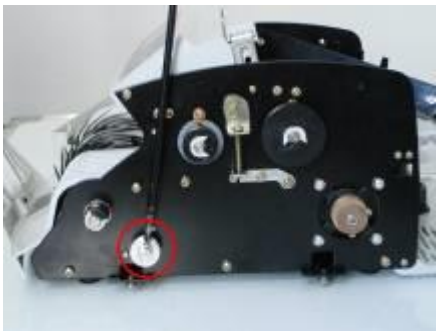
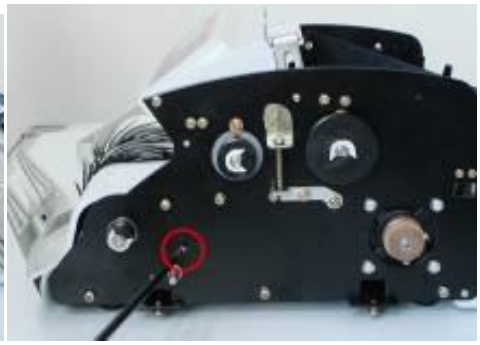
7 Replace small motor

a) Take off the left ,right cover, disconnect the small motor.

b) Loose the screw on the bottom of the power board ;take off the small motor chain., Take off the screws as picture by"+" shape screwdriver, take out the turning wheel. Take off the small motor, Pull out the connecting wire from the hole after take off the small motor.

Replace the small motor ,and recover all the parts.

8 Replace Main motor

a) Open the left and right cover, take off the chain of main motor, loosen the screw, take off the turning wheel, take off the screw ,Disconnect the main motor with capacitor.

b) Take off the main motor from back of the machine, take off the screw. Replace the main motor , then fix all up. Connect to the power ,test if it work well.

9. Replace counting sensor

a) Take off the left and right covers, and up cover.

b) Pull out the counting senor connect wire , take off the left counting senor screw.

Program 7-29

Program 7-30

c) Take off the right counting sensor screw; pull out the connect wire of counting sensor. pull out the counting sensor.

Program 7-31

d) Take out the counting sensor connect wire. Replace the counting sensor, fix all the parts up.

10. Replace magnetic head

a) Take off left cover, open the power board bottom.

b) Take off the screw on the main board by 5.5mm spanner, disconnect the magnetic head.

c) Take off the screws on the magnetic head, take off the magnetic head presser.

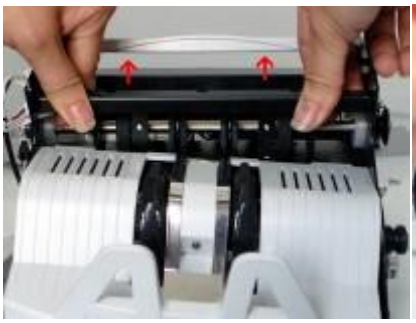
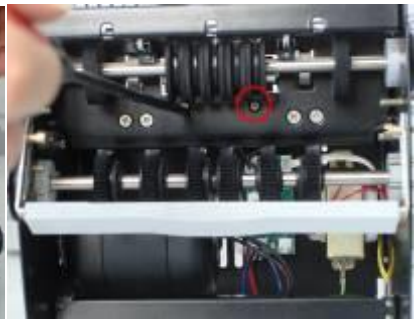
d) Take out the magnetic head and pull out the connect wire from the hole.

e) Replace the magnetic head ,fix all up.


11 Replace send and receive sensor

a) Then take off the screw on the power board bottom.

b) Loosen the screws on the jack of the magnetic head; take out the nut on the bottom of magnetic head jack(;please note do not lose the springs in the magnetic jack.

c) take out the counting sensor and magnetic head, pull the wire from the hole ,then take off the screw on the send sensor. Fix all up after replace.