

Large Format Printer Operation Book



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Introduction

Dear customer thank you for your purchase and use of our company's products. Please be sure to read the instruction book before you use the product. It can help you quickly learn and skilled use of this product.

This instruction book can effectively help you to solve the problems in the process of installation and use. Please make sure to keep it, and put it in easy to find, in order to use again in the future.

This pictorial machine is a mechatronics device , There are both fine organization structure, and complicated electronic circuit system. Institutions in part with precision of the print head, in the process of moving and using slightly to avoid collision. To ensure that the work site clean and with no obvious dust around the machine. Part of the circuit has important CPU, memory and other sensitive electronic devices. When start up the machine must be connected to ground electrode to avoid electrostatic causing other malfunction. This equipment cannot be used in damp environment .

You are using the method of operation and maintenance process directly determines the pictorial machine's length of life , and machine's daily work . So once again remind you must read this manual carefully, operation, maintenance, maintenance as required. So as not to cause the machine can't leak ink, ink and other abnormal phenomenon occurred.

Chapter 1 Notice for use

1.1 The power supply security

- (1) Power: one-way communication 50Hz 220V or 110V AC($\pm 10\%$).
Maximum power machine : 2200W , print power 100W.
- (2) Only can use the printer in the label logo type of power supply .According to different countries and regions, may choose 110 v or 110 v ac power.
- (3) Will all of the devices connected to a properly grounded outlet, avoid the use of sockets and frequent switching between the on and off the equipment (e.g., duplicator, air conditioning system) in the same loop
- (4) Avoid the use of controlled by the switch on the wall or automatic timer socket.
- (5) Make your computer system away from potential interference sources , for example: the speaker or wireless phone stand.
- (6) Do not use damaged or broken power cord
- (7) If you use the additional power cord, bear in mind that the insertion of the additional power equipment total amperes do not exceed the rated amperage of the power supply, In addition, remember that the insertion of the all equipment on the wall to the total number of ampere don't exceed the amperage rating of the wall outlet.
- (8) Don't try to repair his pictorial machine, encounter problems please timely for pictorial machine maintenance and technical personnel
- (9) For man and machine safety, please do good earthed, specific requirements have installed staff informed
- (10) Can't charged printing line plug and pull the power cord, otherwise will causes the damage of the main board.

1.2 Operation cautions

- (1) Always turn off the power switch to using pictorial machine (pictorial machine on the right side of the rear power switch) . In front of the machine power supply has not been cut off, please don't take photo electrical source plug or unplug other related cable
- (2) Please do not put the machine tools or other items with the print platform or on flat, so as not to slow to clean up before the machine's operation cause unnecessary losses.
- (3) Before handling pictorial machine, please make sure you print the car has been fixed in initial position。
- (4) When print the picture, the paper machine(prevent become warped piece) must be used, in case of paper by partial and blowing nozzle.
- (5) Someone must watch when the machine work.(the machine must be operated by professional operators).
- (6) Encoder strip should be regularly check to see if clean and damaged, if dirty should use cotton swap dipped in alcohol to clean.
- (7) Guide should be regularly check to see if clean. It is recommended to use 1 to 2 months to be above the guide way butter (or parts of lubricating oil, etc.), decrease the slider friction.
- (8) Regularly check the maintenance station cleaning job.
- (9) Don't let the nozzle left under the maintenance station exposed to the air for a long time.
- (10) Abnormal shutdown condition. Do not manually pull the car quickly, should let its boot automatically back to the warehouse.

- (11) Regular maintenance of machine, reducing dust, the ink on the influence of the machine
- (12) Note: the machine must be connected to ground; When the dry air, static problem that not allow to ignore, when using some lamination and light medium, take electrostatic charge (especially when into the paper work soon).Electrostatic charge can lead to the machine and the card security is damaged, will take the ground wire is the only way to electrostatic discharge. Because the static power itself is a huge, so when charged the ink head operation, ensure that the hands have discharge (contact grounding metal body or wear in addition to electrostatic bracelet), otherwise easy to cause damage of the board and the nozzle.

1.3 Location of the installation and usage environment

- (1) Please make the pictorial machine in level, stability, and greater than pictorial machine in the plane. If pictorial machine tilt or have a certain Angle, the normal work of the machine could not be performed
- (2) To set aside enough space around the pictorial machine to ensure the normal ventilation of pictorial machine.
- (3) Make the printing machine be placed in close to the wall outlet in order to easy to plug not the place of the drastic change of temperature and humidity, easy to use pictorial machine. Avoid printer by direct sunlight, strong light or heat source.
- (4) Pictorial machine using temperature: 18 to 26 degrees Celsius; Humidity: 38% to 38%.To make the machine can run in the groove, please configure air conditioning and indoor temperature and humidity meter.
- (5) The machine must be far away from the noise source.

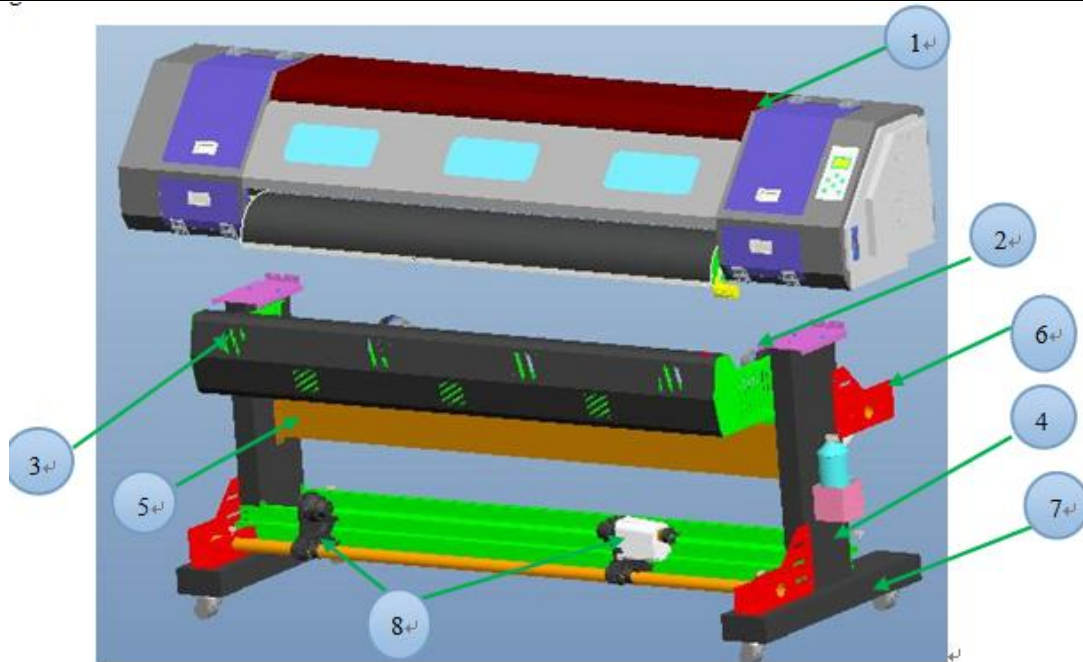
1.4 The ink is put and precautions for use

- (1) Please put the ink bottle at the children can't reach, don't let the kids drink ink cartridges or contact.
- (2) If the ink stick to the skin, please wash with soap and water .If the ink splash the eyes, immediately rinse off with clear water.
- (3) Don't shake the ink bottle, so as not to cause the ink leaks.
- (4) Ink bottle after using for a period of time (usually for two months), immediately take a thorough cleaning, and dry. Replace the ink bottle should pay attention to clean, to ensure the quality of printing. E, the ink should be placed a cool storage, avoid direct sunlight.

Chapter 2 Machine introduction and the preparations

2.1 Machine assemble

- (1) Open the packing of the machine, take out the machine parts, assemble respectively as shown in the figure below:



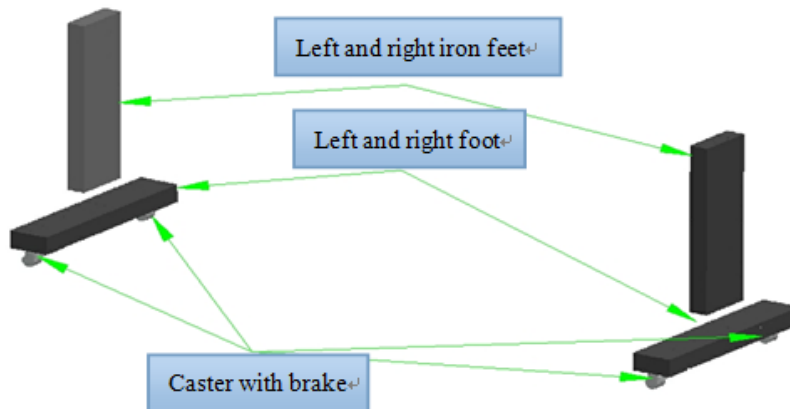
Parts name:

- (1) Main body (2) Paper release system (3) Air drying apparatus (4) Iron legs
(5) Beams (6) To support a fixed plate, (7) Foot rack (8) Paper receiver system

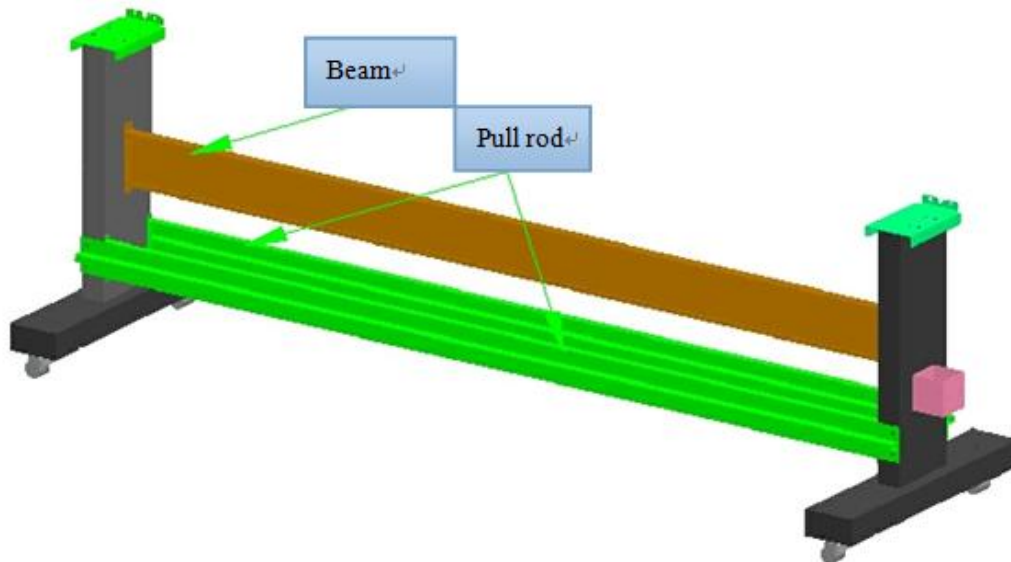
Foot rack installation:

1. Put left and right foot on left and right iron legs, and use(socket head bolts 8-M5X10) fixed the caster with brake installed on the left and right foot with hex bolt 8 - M5X10)

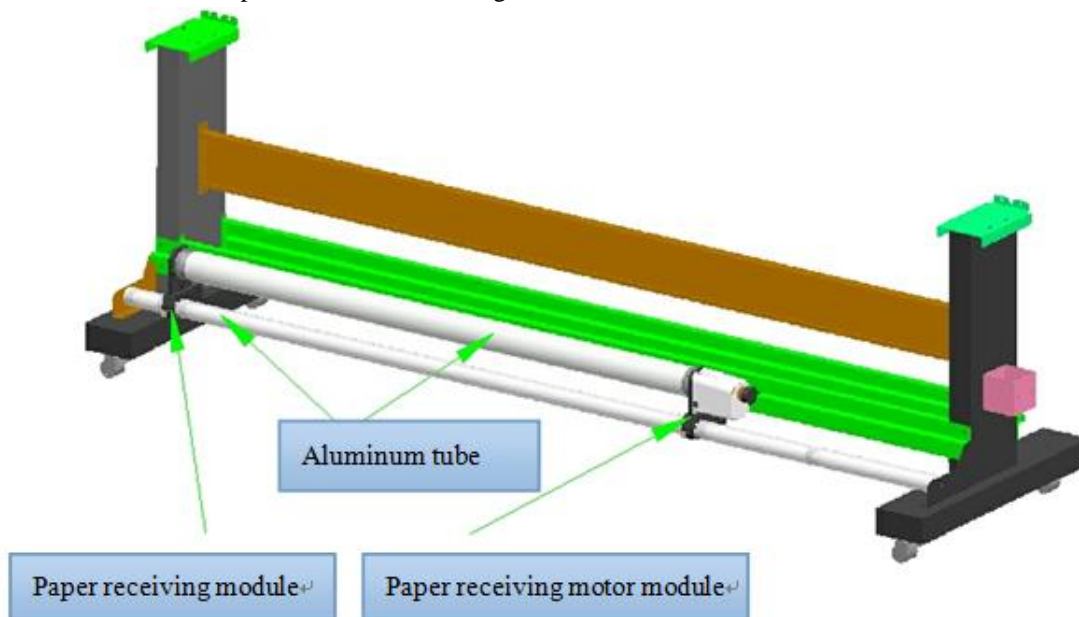
Note: the lock in the direction shown by the arrow as shown in the figure :



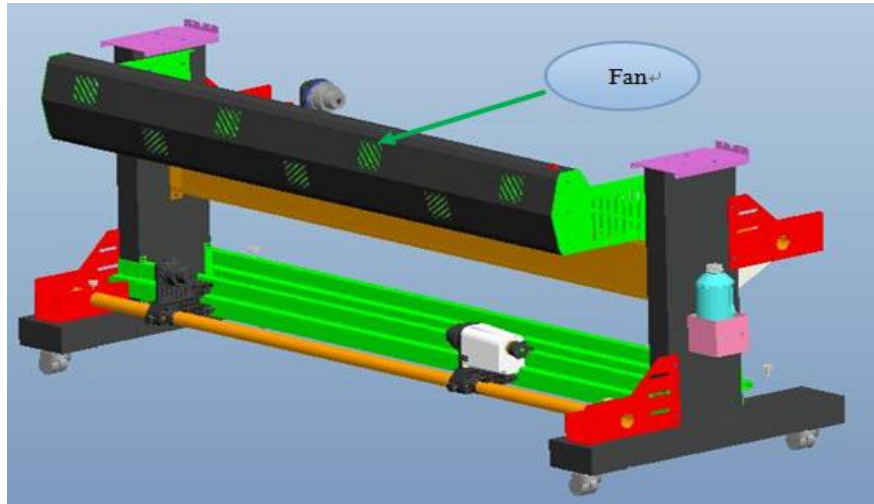
2. Then make the rod installed in between them, and use the socket head bolts 4-M5X10 fix, as shown in the figure :



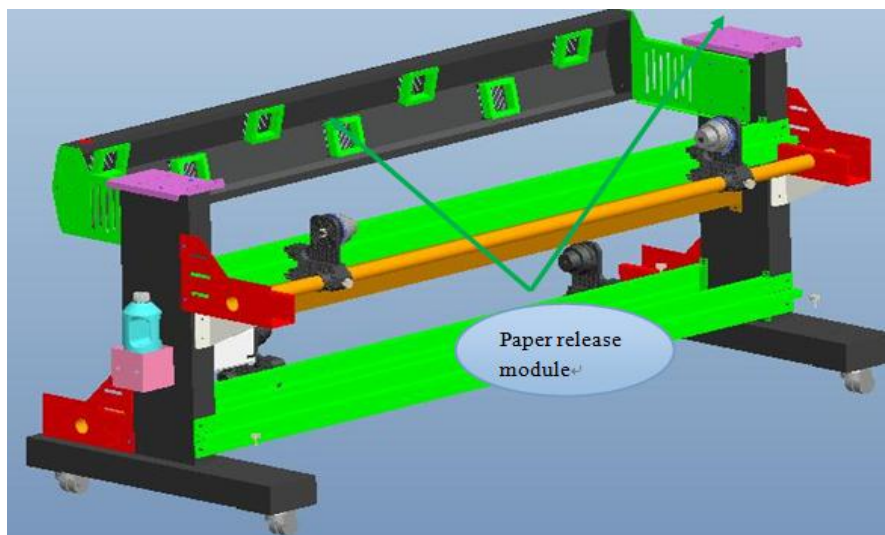
3. Make support fixed plate and the iron legs and left and right foot (use the socket head bolts 6-M5X10、 4-M4X6 fix. Then with support around a fixed plate (4 - M6X25 with hex bolts) on both ends fixed, put the (10)assembled paper electric module and (11)paper receiver module into the aluminum pipe respectively, then put the paper expansion component (with straight grain handles 2 -M5X25) fixed on the bracket parts, as shown in the figure



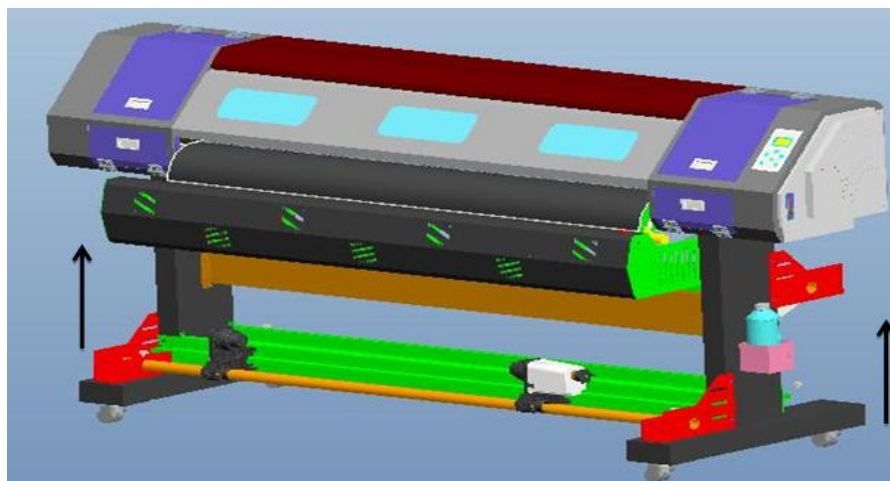
4. The fan supports (hex bolts using 8 - m5x10) fixed on the iron legs around, Put the assembled air drying apparatus (hex bolts using 8 - m4x10) fixed to the support member, As shown:



5. Make support fixed plate and the iron legs and left and right foot (use the socket head bolts 6-M5X10、 4-M4X6 fix. Then with support around a fixed plate (4 - M6X25 with hex bolts) on both ends fixed, put the (10)assembled paper electric module and (11)paper receiver module into the aluminum pipe respectively, then put the paper expansion component (with straight grain handles 2 -M5X25) fixed on the bracket parts, as shown in the figure



6. After installation of the above steps, you can install the fuselage in leg frame, then on the round hole location and with a socket head bolts 4 - M5X10) fixed (in the direction of the arrow shown), as shown:

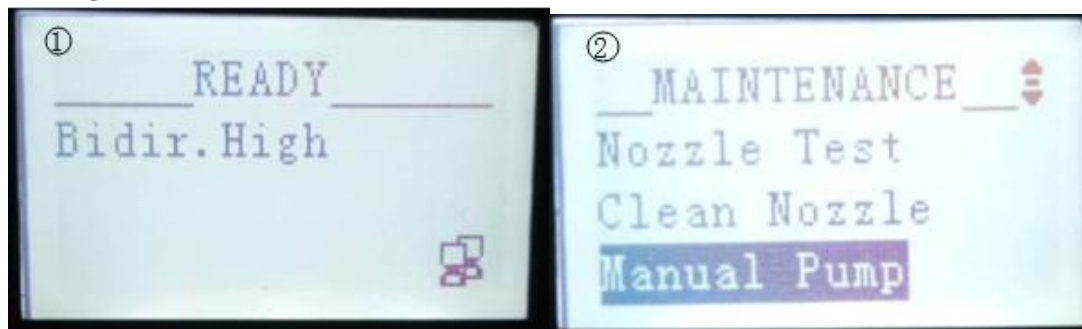


2.2 Key board instruction



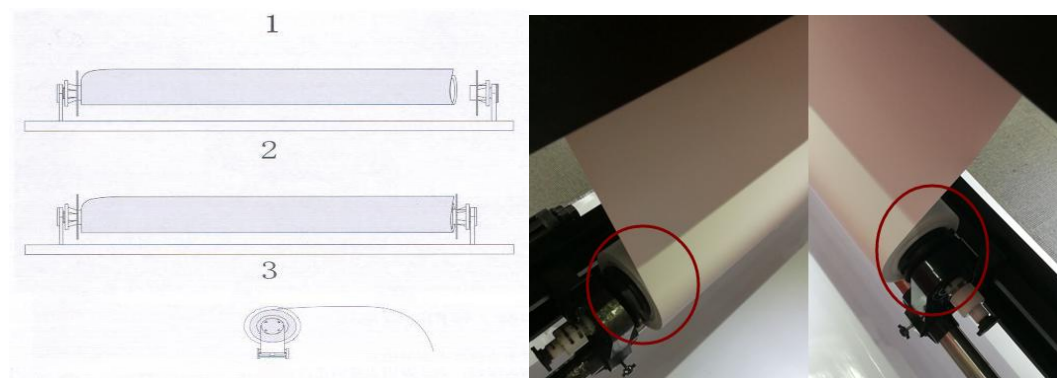
- 1、 Left and right direction key: under Ready state can move the carriage to left or right, under Menu state can page up or down.
- 2、 Up and down direction key: under Ready state can move paper to front or back, under Menu state can decrease or increase value.
- 3、 Exit key: under Menu state can return last menu, under Printing state can into adjusting menu, increase or decrease Bi-direction value or Pass step value during printing.
- 4、 Enter key: into the main Menu page.

Marks: Picture 1 means printer connect successfully. Picture 2:under state of picture 1 condition, click right, then enter into Maintenance interface



2.3 The installation of print carrier

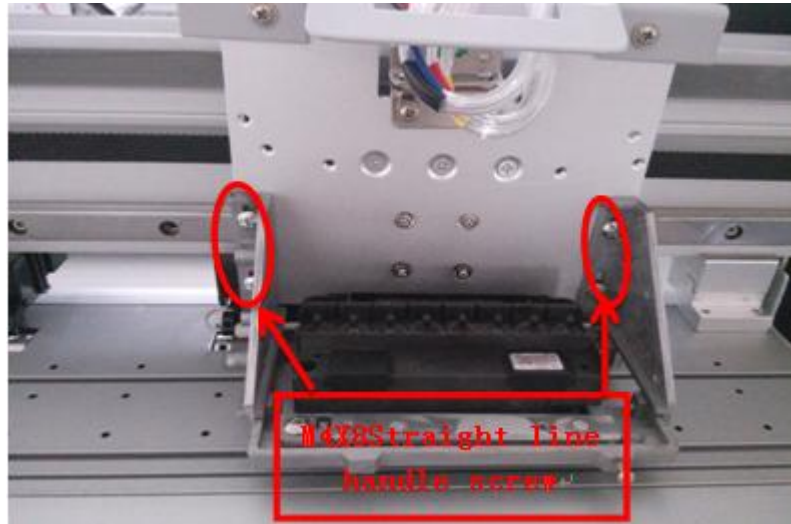
Notice: This printer can use the roll material but make sure it can through straightly from back side. If it is crinkly or worn of both sides, must cut the worn part avoid the material scrape the head surface during printing.



Lift up the pressure wheel before installing material, according upper figure1\2\3 to hold the material on release system, then through the pressure wheel from backside, pull material tightly and put down pressure wheel.

2.3.1 The distance between nozzle and printing carrier

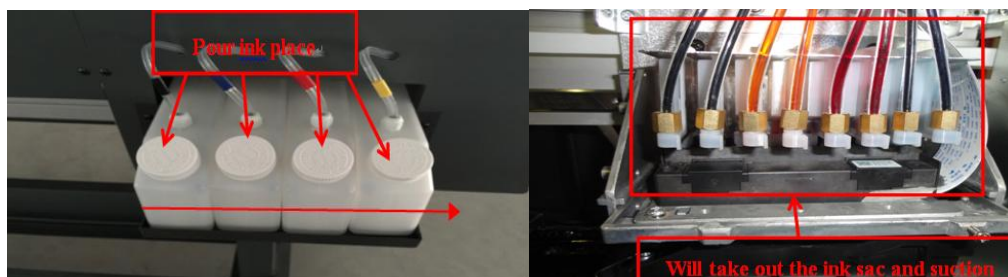
Adjust the carriage up and down according different thickness material, normally the best height is 1.5-2.0mm. Adjusting way: loose 4 screws which on both sides of carriage, then carriage can up and down, after adjusting well, screw tightly. As shown in figure:



2.4 Ink installation/use matters needing attention

- (1) Ink must be far away children.
- (2) If the ink splash into eyes, please washing with water immediately.
- (3) Cleaning the ink system must using the cleaning liquid which come with the printer.
- (4) The ink using environment temperature suggesting is 18℃—28℃.
- (5) Please the ink should be placed cool room ,avoid hight or low temperature and shine directly.
- (6) Please using the ink immediately after open,it is not good for keeping long time.
- (7) If found the ink is freezing under low temperature, just let it unfreeze some hours under the normal room temperature.
- (8) If the ink splash to the hands or cloths, washing with water immediately.
- (9) Don't try to parse the cartridge.
- (10) The ink is a chemical product, please deal with the empty bottle and waste ink tank with correct way, avoid dirty environment. Please clean the ink system with cleaning liquid before install it.
- (11) Do not shake the dampers when installing ink, must use the ink that suitable for the printer, cannot mix different brand ink.
- (12) Fill the ink slowly when stop printing, put the ink tubes into ink tank according color marked then close the cover.Suck the ink to the dampers one by one with syringe.

(13) Ink volume in all ink tank should not exceed half of the ink tank.



Notice:1. Donot screw the ink tank cover tightly, because the ink will reduce during printing and air pressure will decrease inside ink tank, if cover screw tightly, the ink will go back to ink tank.
2. Please suck the ink to damper by syringe slowly, avoid damper is damaged easily.

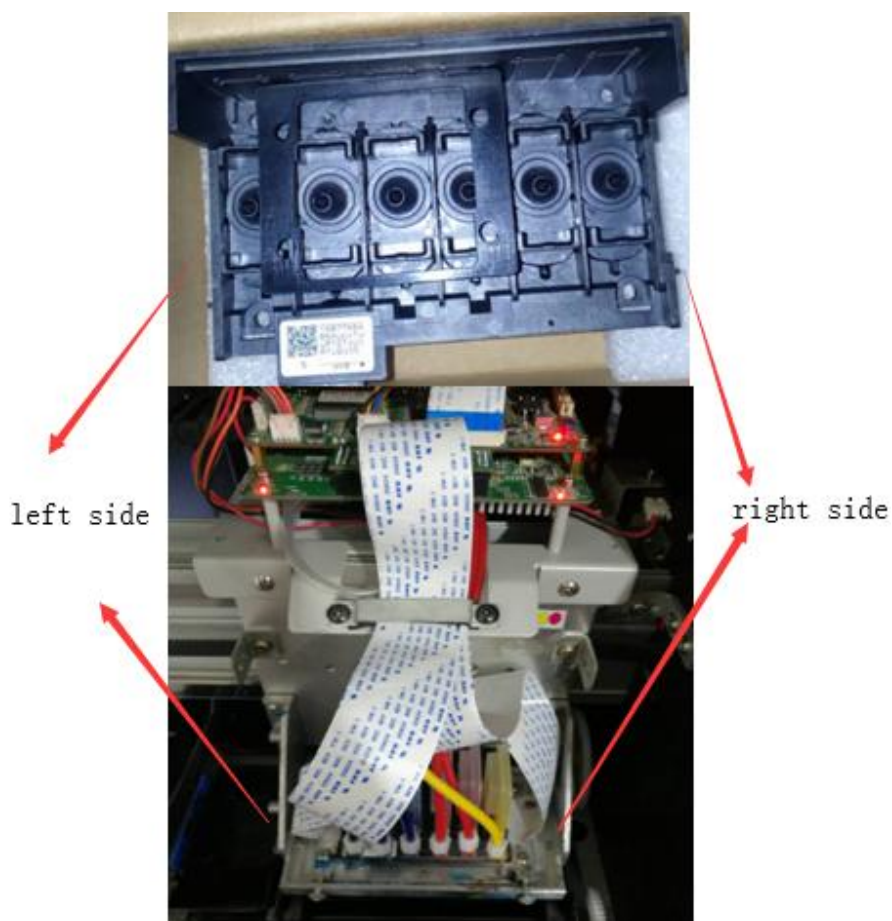
2.4.1 Manual pumping ink

After finish installation work(including printer body, software and head),fill suitable ink amount into ink tank, then using syringe to pump ink to ink dampers.

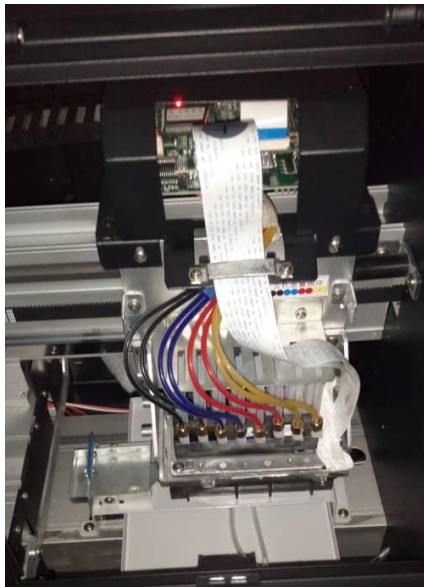
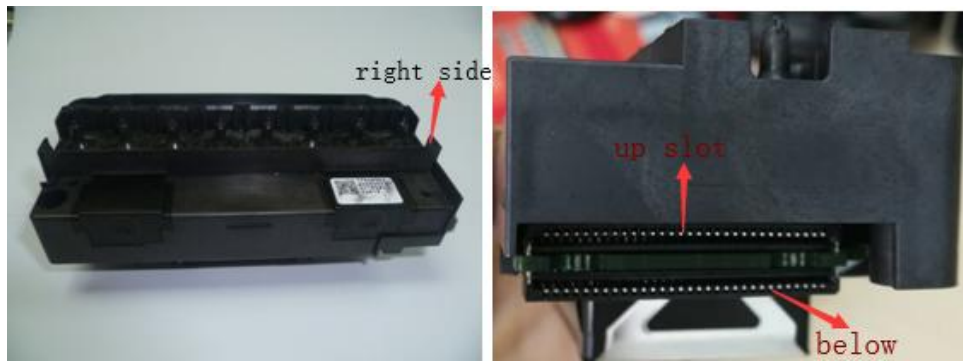


2.5 DX11/DX5/DX7/ head installation and cable connection

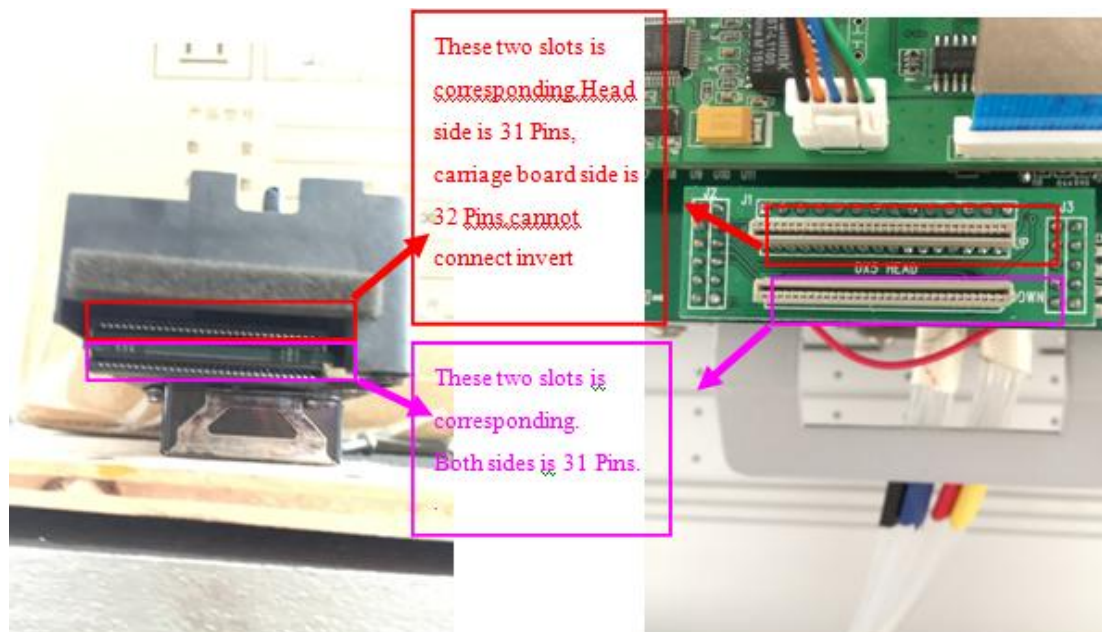
- (1) DX11(XP600) head: the up cables connect the left side of head, the below cables connect the right side of head



- (2) DX5 head: the up cables connect the up cable slot of head, the below cables connect the below cable slot of head. slot in the right side of head



There are 8 ranks of each head, each rank have 180 nozzles. There are two slots of each head, as following figure:



There are two data cables on the carriage board and they are different. the Up cable: one side is 31 Pins, another side is 32 Pins. The down cable: both sides is 31 Pins.

- (3) DX7 head: the up cables connect the up cable slot of head, the below cables connect the below cable slot of head, slot in the left side of head

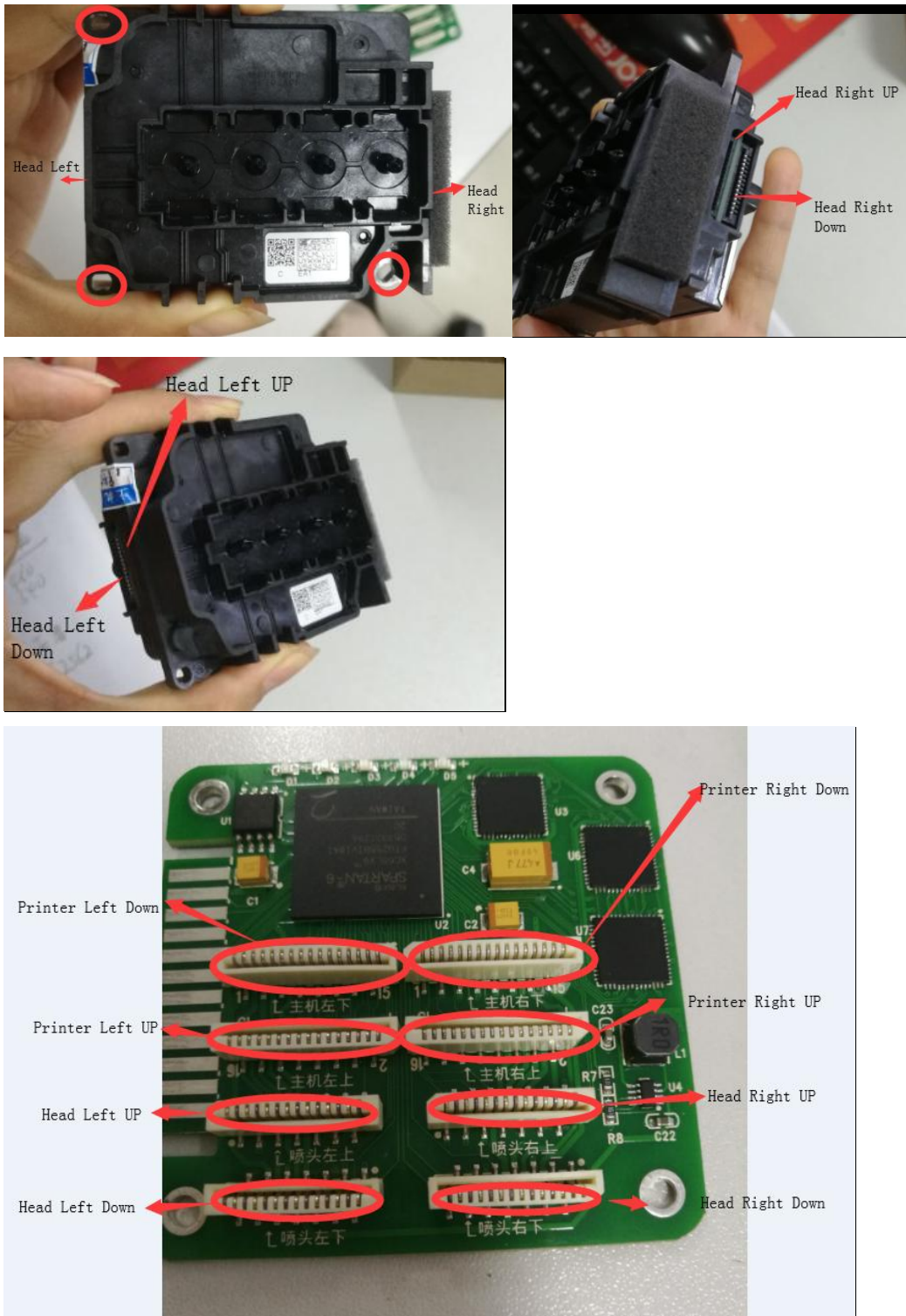


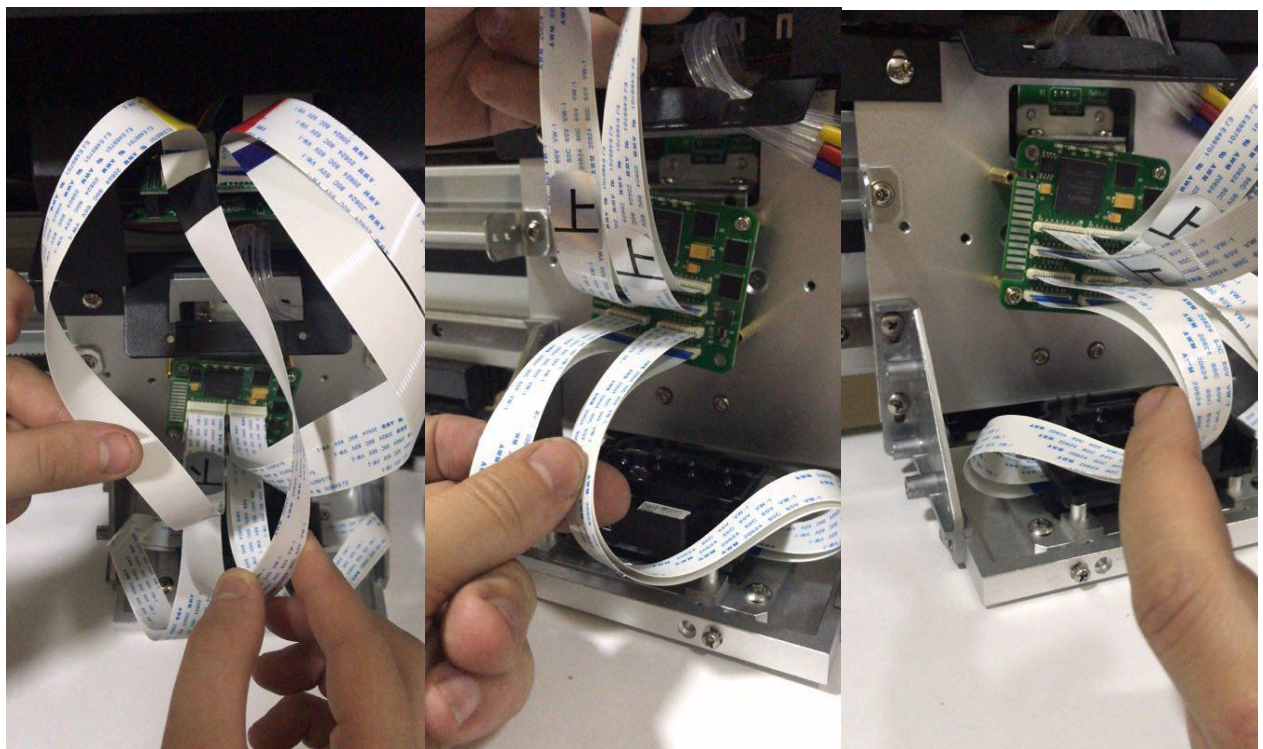
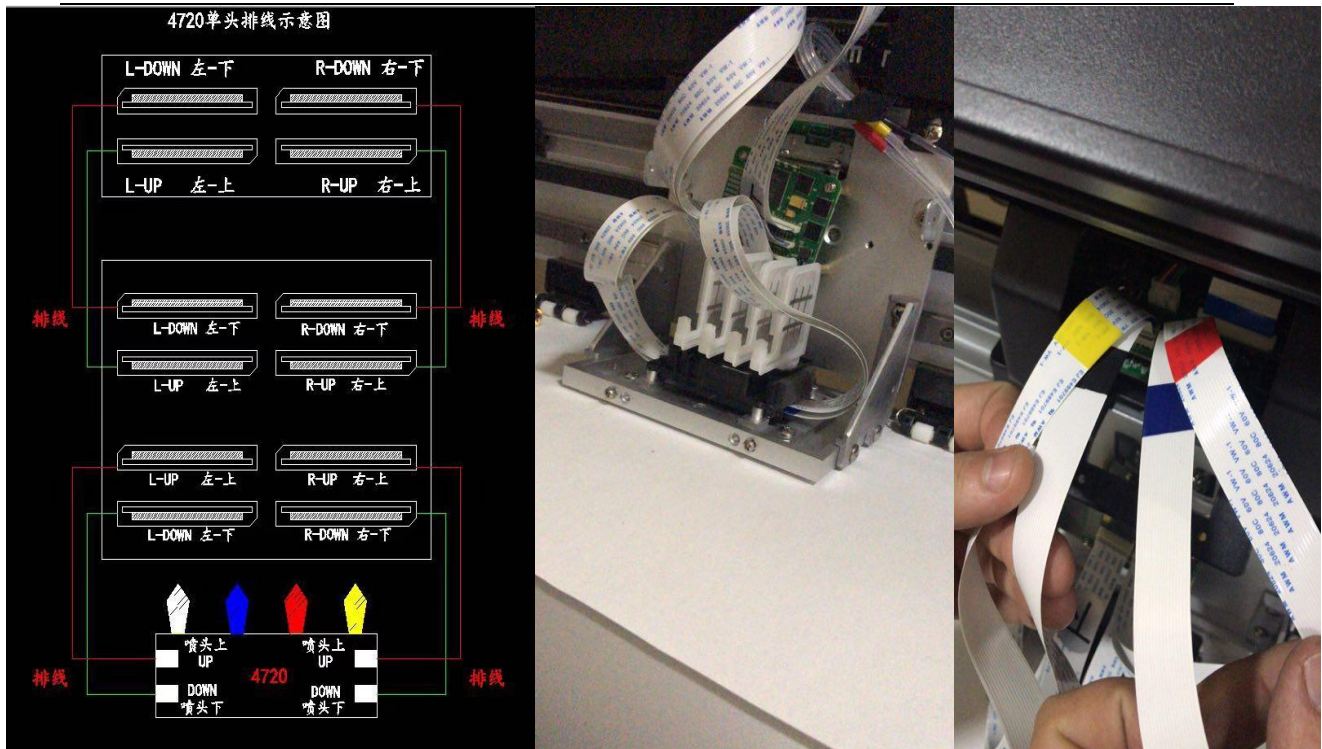
- (4) 4720 head: Connect cables of green Decryption Board, head board and head. Then insert dampers and fix head.

Check the 8 pcs cables. 4 pcs is wider than the other 4 pcs.

Use the wider one to connect the green Decryption Board and printer head board following the following diagram.

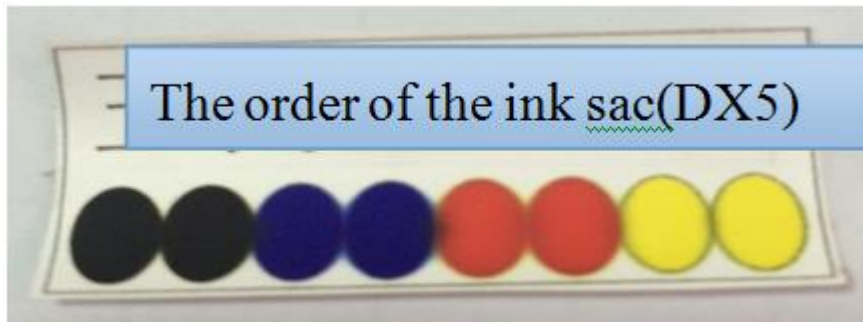
Use the other 4 pcs cables to connect the green Decryption Board and head following the following diagram.



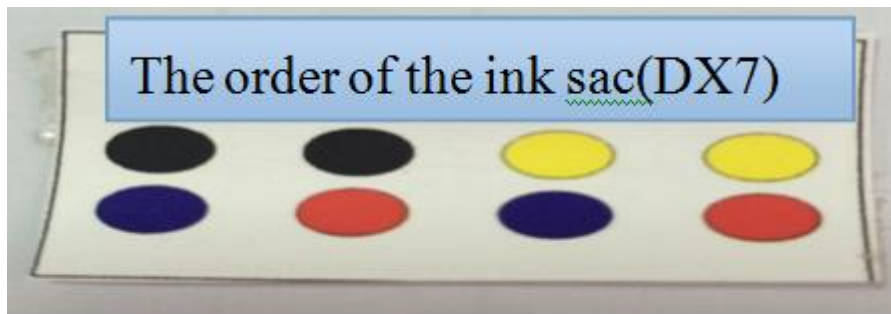


2.6 Color sequence

DX5 Head color sequence: face to the printer, from left to right is: KK CC MM YY .



DX7 head color sequence, face to the printer, from left to right is: inside KK YY, front CM CM



4720:KCMY

2.7 Carriage board and cables instruction

DX5 carriage board and cables installation (please reference part 2.5)



DX7 carriage board and cables installation

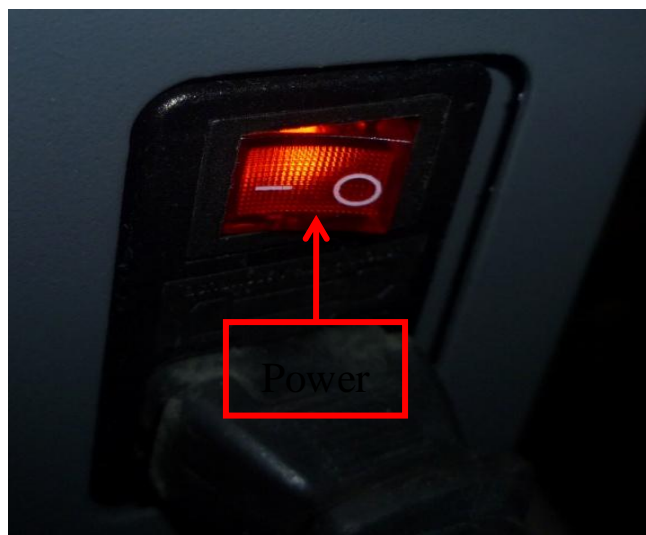


Chapter 3 Calibration tool Installation

Download all installation files via the link you received first. Then

3.1 Starting up

- (1) Power on, as following switch to “—” state

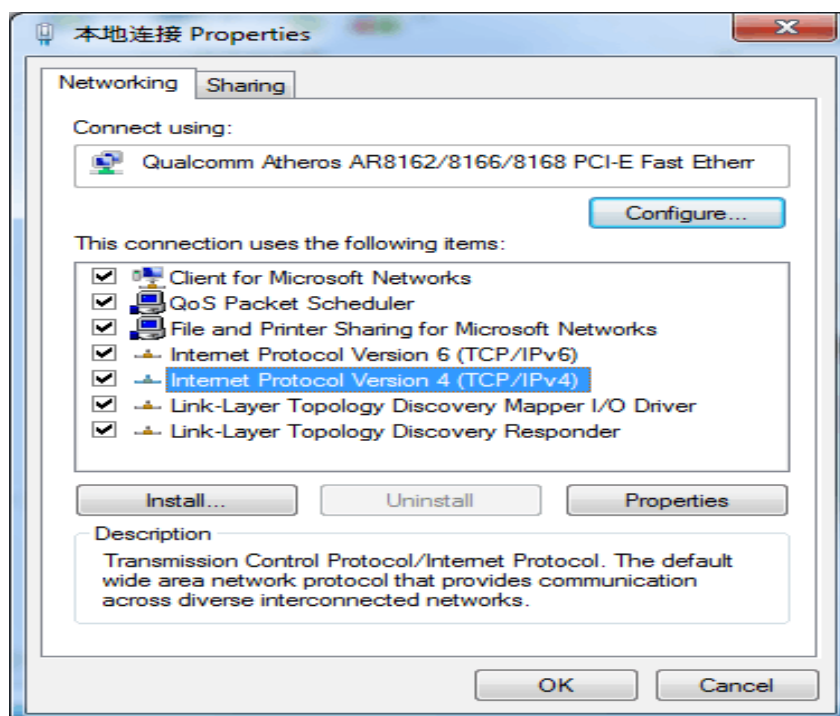


- (2) Power off, switch to “O” position directly

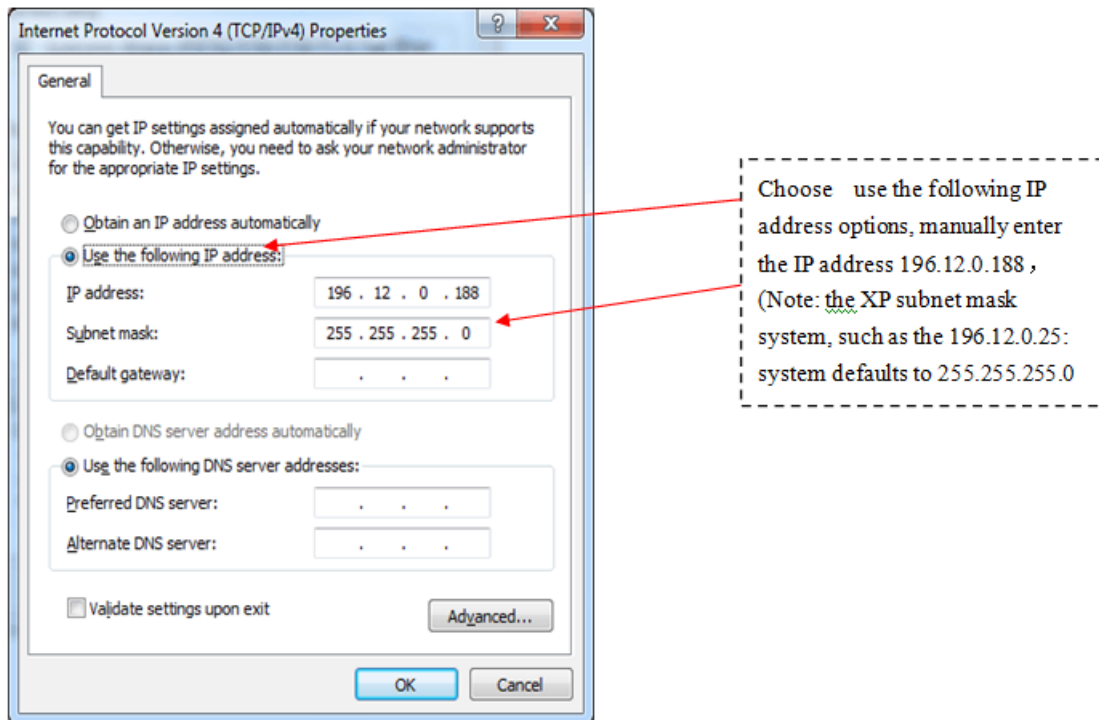
3.2 Calibration tool instruction

- (1) Set IP from PC.

Right click on the icon in the online neighborhood - > select the local connection, right-click the property to open the interface.

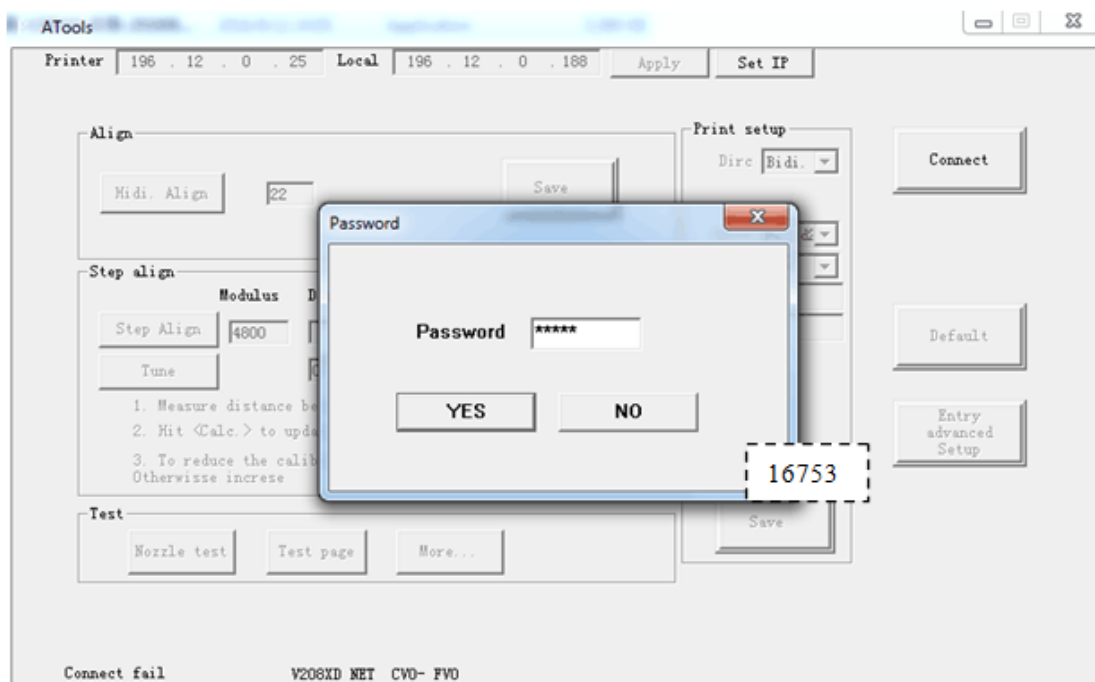


Double click the Internet protocol (TCP/IP) to open the following interface



(2) Set IP of calibration tool

Double click calibration tool

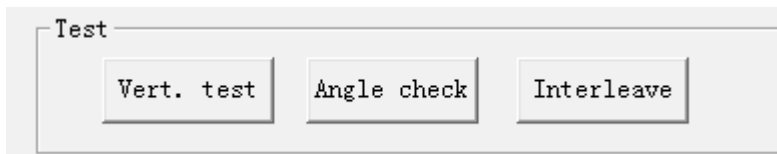


Click "set IP address" button ,will show input password window, enter **16753** digits. Change the printer IP to: 196.12.0.25;Loca IP to: 196.12.0.188. The printer IP address is the default address of the printer, If you set user defined IP address from printer, the printer IP address corresponding to the user defined IP address. After set correct IP , click "apply" button, Connect the printer and computer with network cable, Click the "connect" button, you can use calibration tool to set parameters and operations.

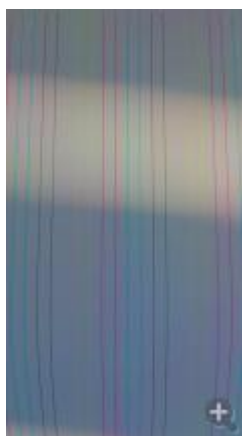
Calibration software using introduction

- 1) Vertical test: Calibrate physical level position of head.(have adjustment before leaving factory. no necessary to adjust again)

Run calibration tool, click more button after connecting. Click Vert test button to print the testing pattern



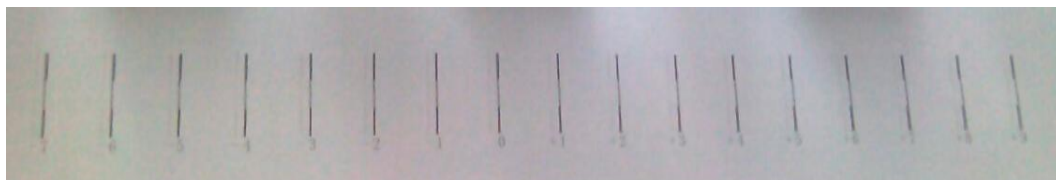
Adjust the physical position of the head according to the printing pattern, till the final vertical test pattern line is straight. As following:



- 2) Bi-direction calibration:

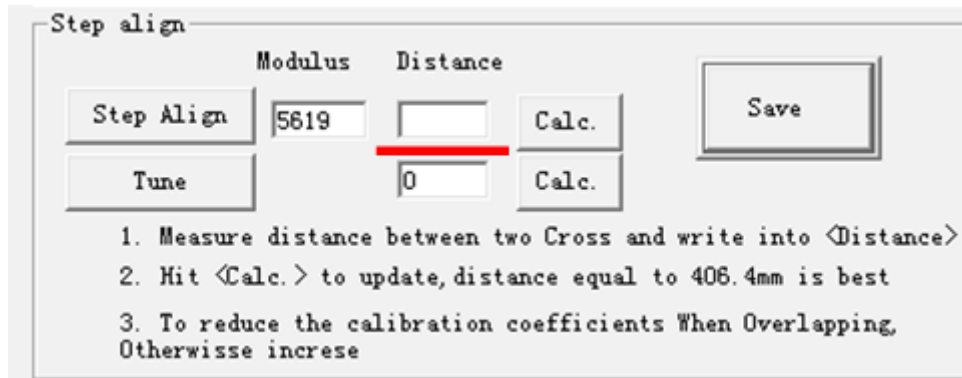


Click the Hidi Align button to print testing pattern:



Look the printing pattern, choose the best straight line, then adding corresponding value, click save. For example -3 is the best straight line, the result is $17 + (-3) = 14$, input 14 instead 17 and click save.

- 3) Pass step calibration(Single head no necessary)

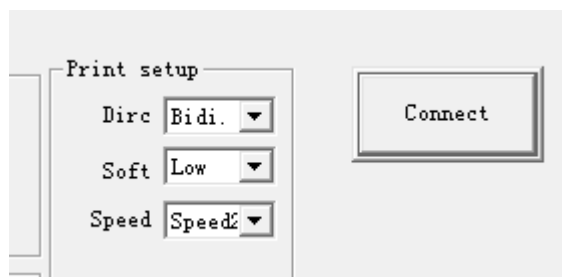


Click Step align to print the testing pattern:



Measure the distance of two arrows position and unit using mm. Input the distance value to blank box, click calculate button, the calibration parameter will instead original value, click save. You also can input the calibration parameter manually and click save.

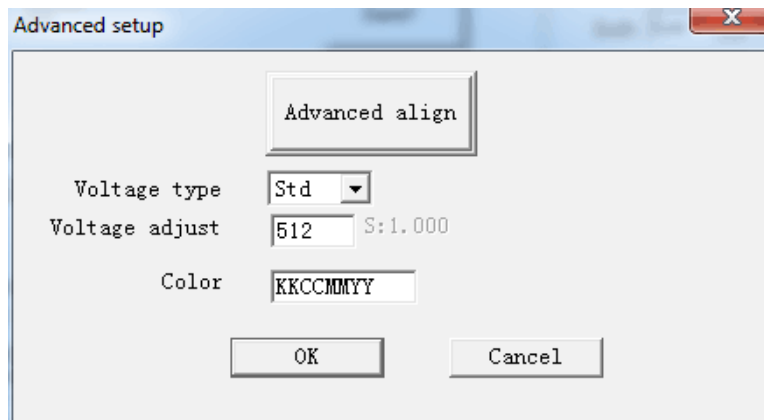
4) Print setup



Print setup: 1. Set print direction, 2. Set feather effect, 3. Speed.

5) Advanced setup

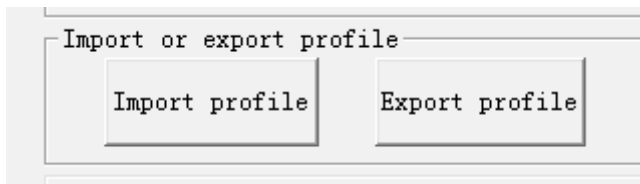
Click advanced setup button, input password: 16753 into advanced setup menu:



- (1) Voltage type:choose Std,default setting.
- (2) Voltage adjust: Adjust the head voltage, if spray ink weak or spray out,can adjust higher this value; if head loose ink or color too thickness, can adjust lower this value.Normally between 460-580,standard is 512.
- (3) Color: Sequence from left to right as figure KKCCMMYY, this sequence can adjust,but if adjust sequence here, also need to swap the damper same as here.
- (4) Channel allocation: there are three kinds of configuration of A single color: White + 4 CMYK plus 4 B single white ink; 6 color + white white ink: KCMYcm 2; C double 4 color: KKCCMMYY no white ink. According to customer needs to adjust the configuration.

6) Calibration parameters import and export

Click More button of Maintenance area will show the import and export window



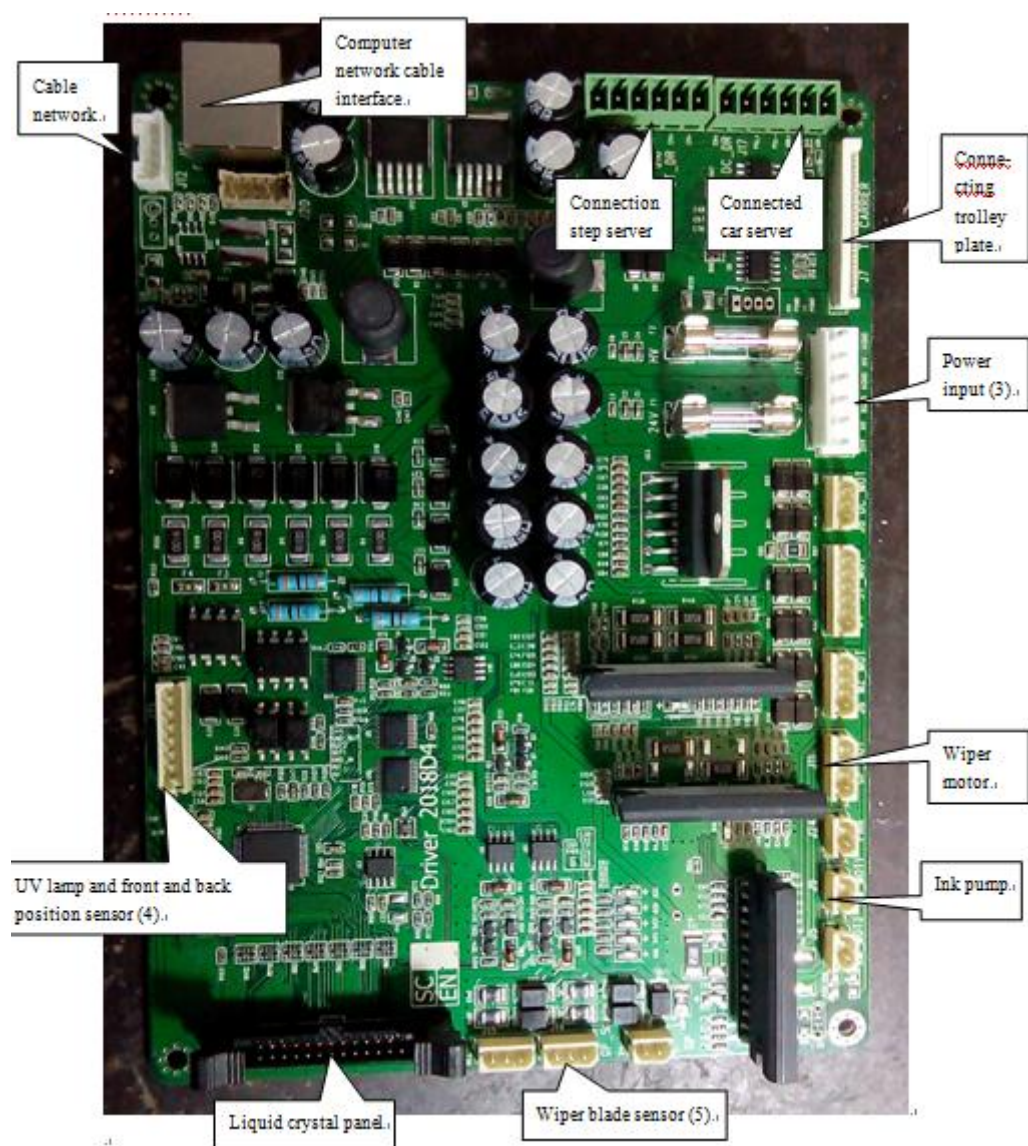
After calibrate all parameters well, you can click Export profile button to save on computer, if you change boards next time, you can import the well parameters to the new boards, it will save a lot of job for you.

Control panel board



Boards instruction

Mainboard

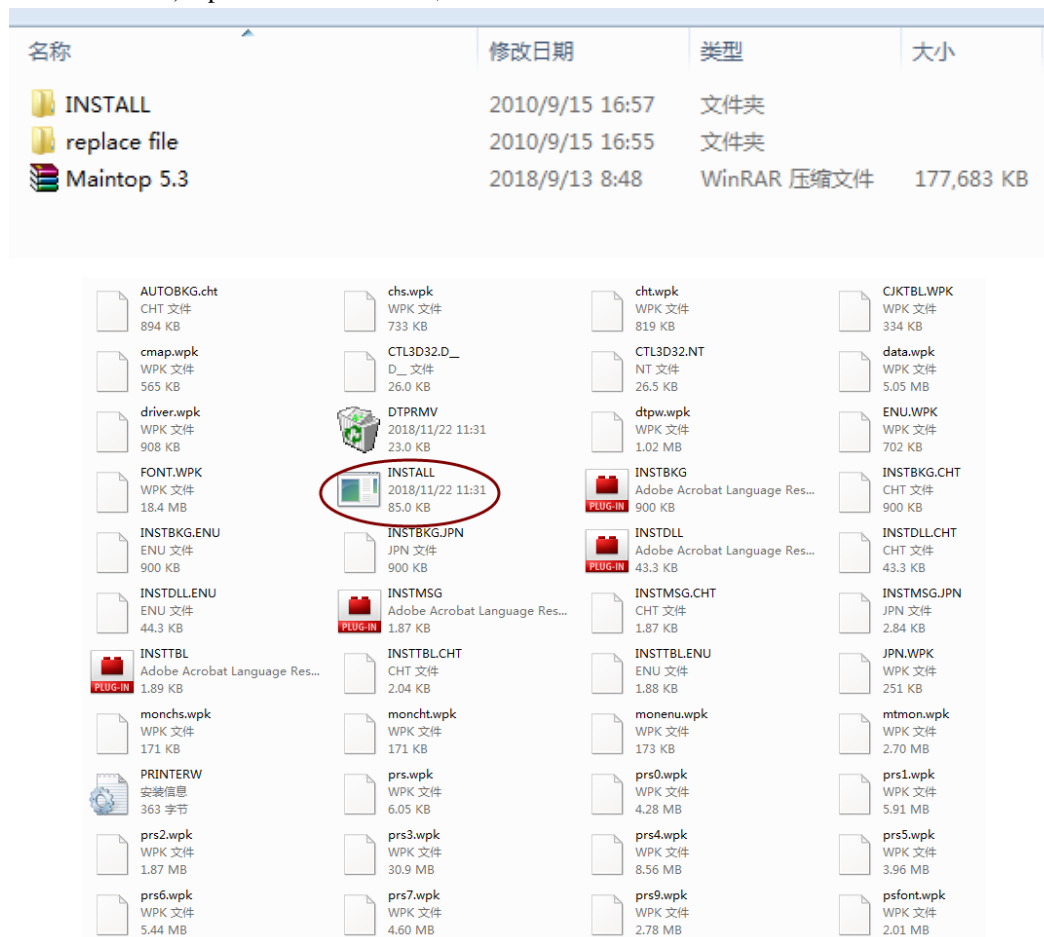


Chapter 4 Software installation

4.1 Maintop installation

(1) Install Maintop Software.

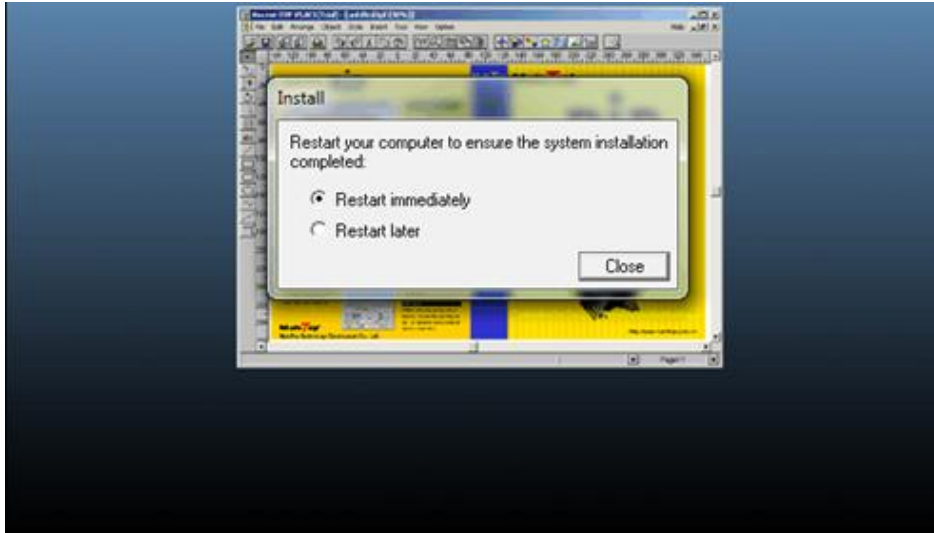
First ,download the Maintop via the Google driver link, then unzip the software to the hard drive(By WinRAR software).Open INSTALL folder, run INSTALL.EXE.





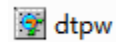
Setting the installation path of the software, you can use the default value.



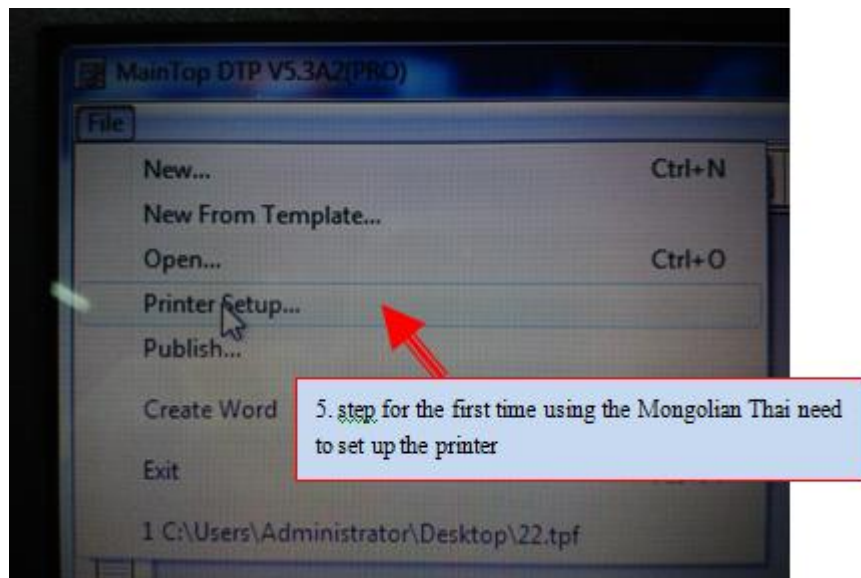
Installation completed, choose restart later.



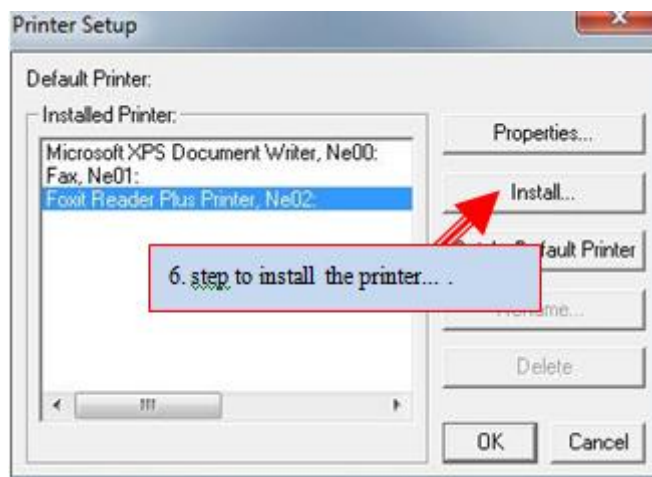
Then right click , choose properties, open file location, then copy  dtpw in the replace file folder, paste this file into Maintop installation file folder.



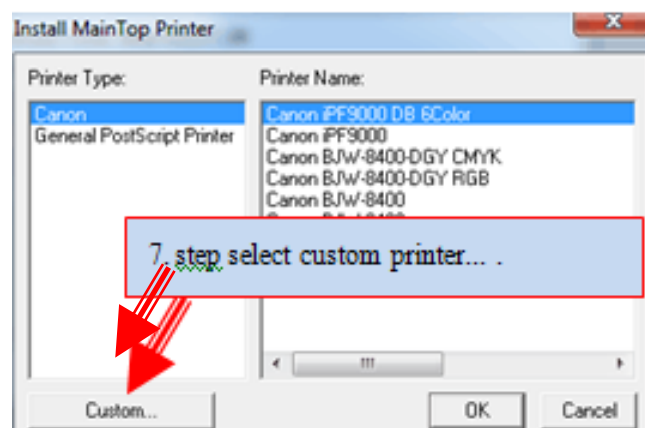
After replace files, starting the Maintop software, select the file / printer settings, install the print driver(color curve).



Enter the printer setup interface, install the printer..."



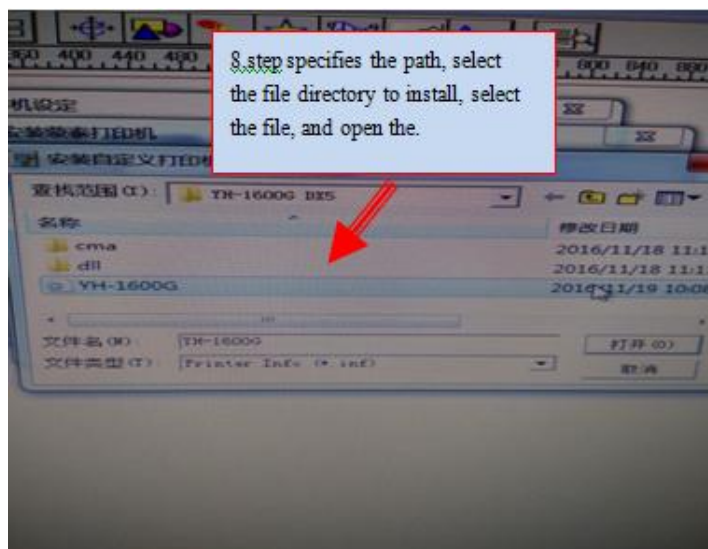
Into the installation of the printer interface, select custom printer... , "



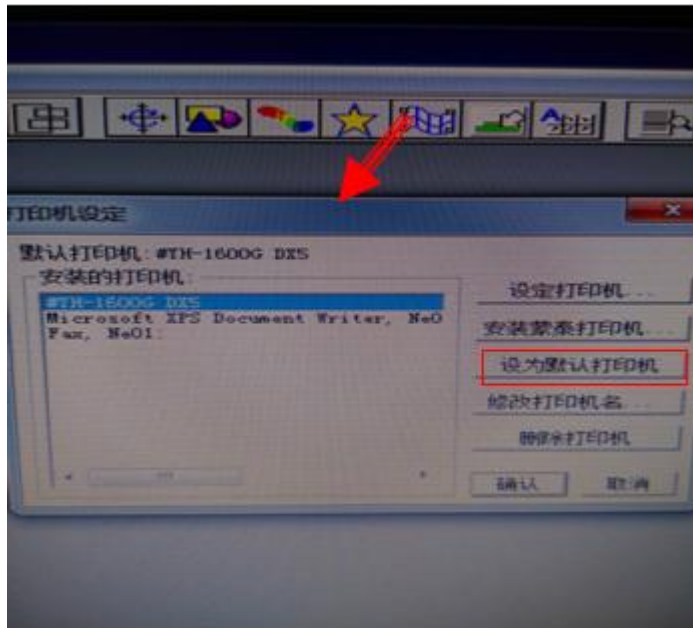
To find the folder which the printer driver file(head curve) is inside it.

YH-1600G DX5				
DX11 OUTDOOR	2017/6/3 15:24	文件夹		
DX11 head Calibration tool	2018/9/11 13:58	WinRAR 压缩文件	1,305 KB	
DX11 INDOOR 0321	2018/9/13 9:02	WinRAR 压缩文件	4,028 KB	
DX11 OUTDOOR CURVE	2018/9/13 9:04	WinRAR 压缩文件	3,945 KB	

Enter the custom printer browser interface, specify the path, select the file you want to install.

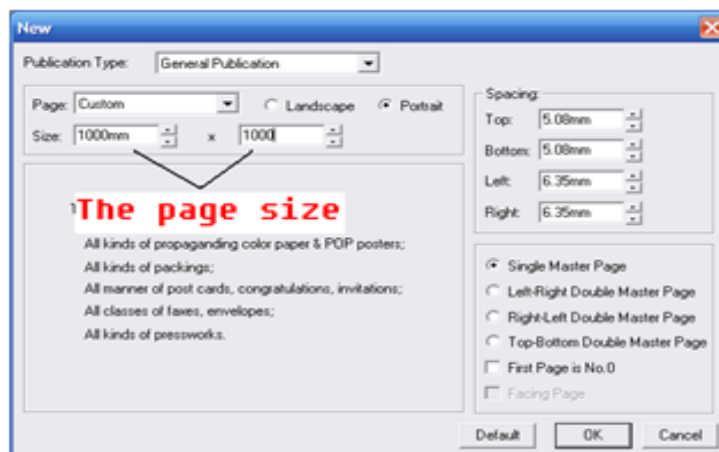


Back to the printer settings interface, the newly installed "#YH-1600G DX5" printer driver is set to the printer default.

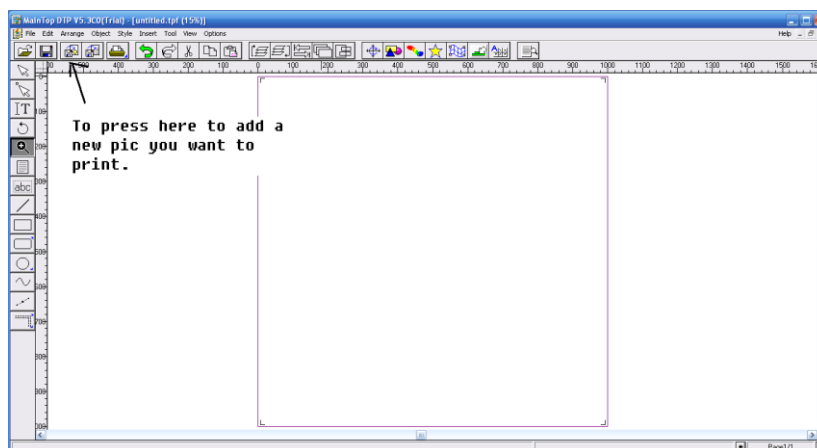


To edit the file in maintop and output from maintop

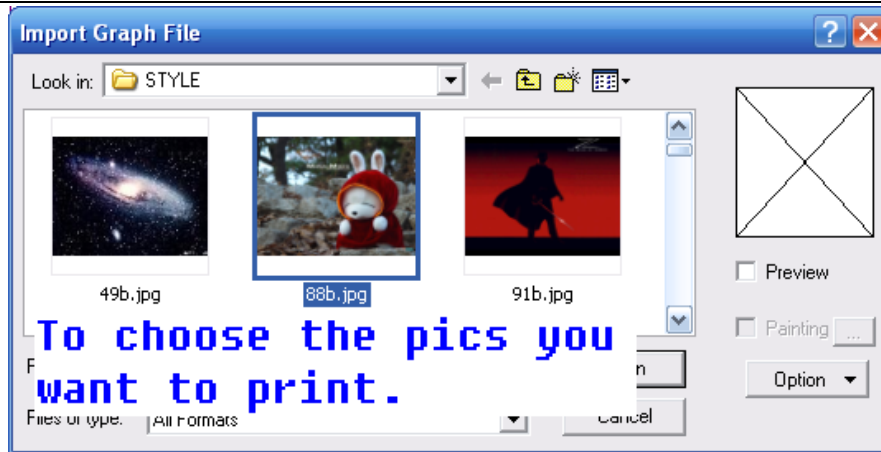
1.To open the maintop software and press file to add a new file.



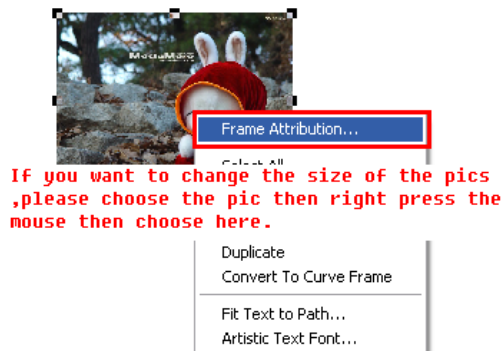
2. After setting the page size of the new file, and then to press this icon to add a picture you want to print.



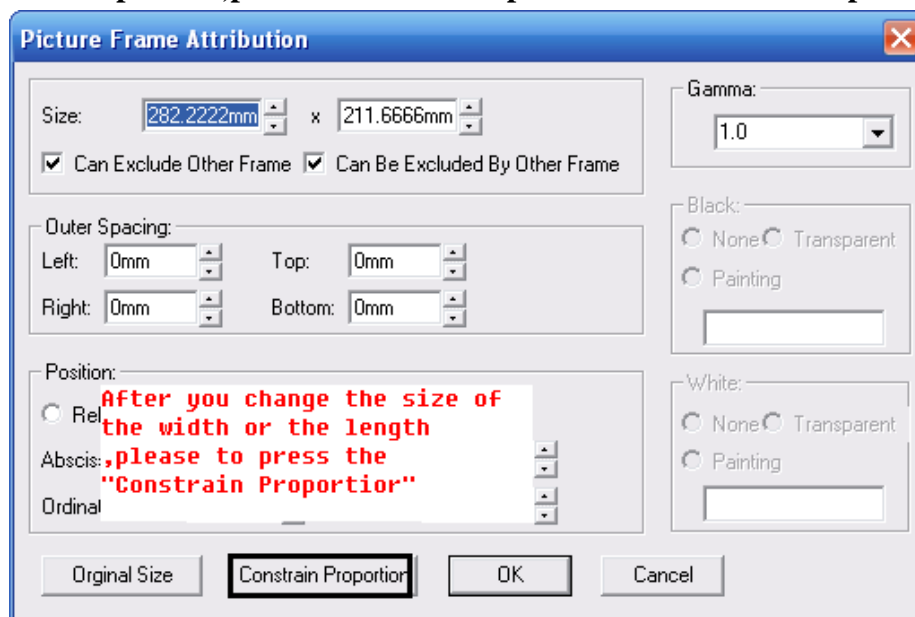
3. To find the picture you want to print.



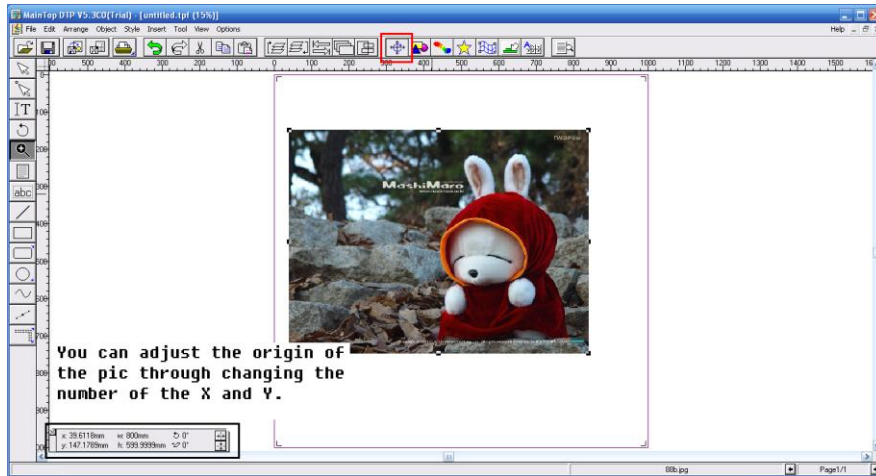
4. If you want to change the size of the picture, you can choose the picture you want to change ,then right press the mouse and choose the "Frame Attribution".



5. Now you can change the size of the pic ,but after you change the width or the length of the picture ,please remember to press the "Constrain Proportion".

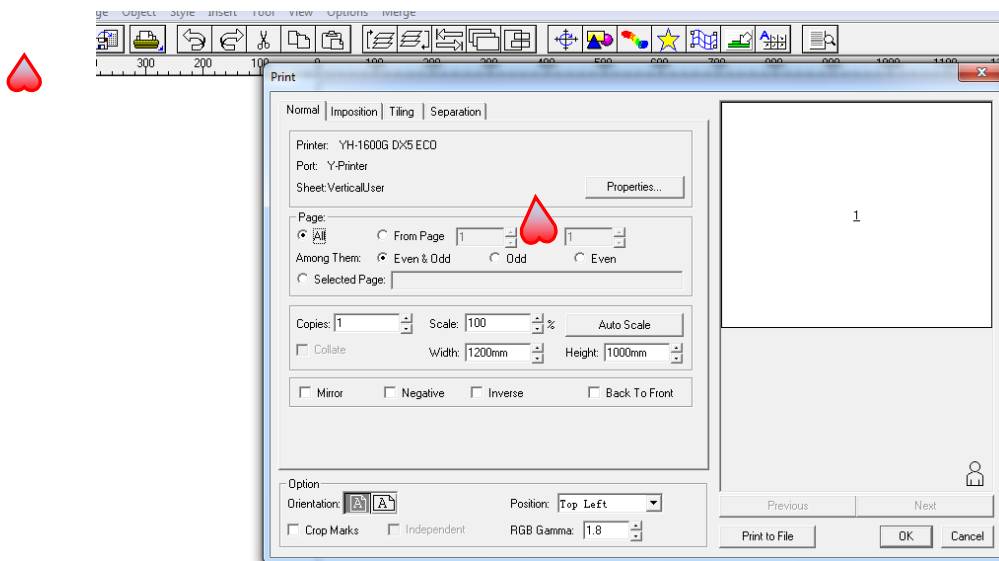


6. To press the icon in the square first, then it will appear the small window of the tool for change the margin and the angulation of the picture.

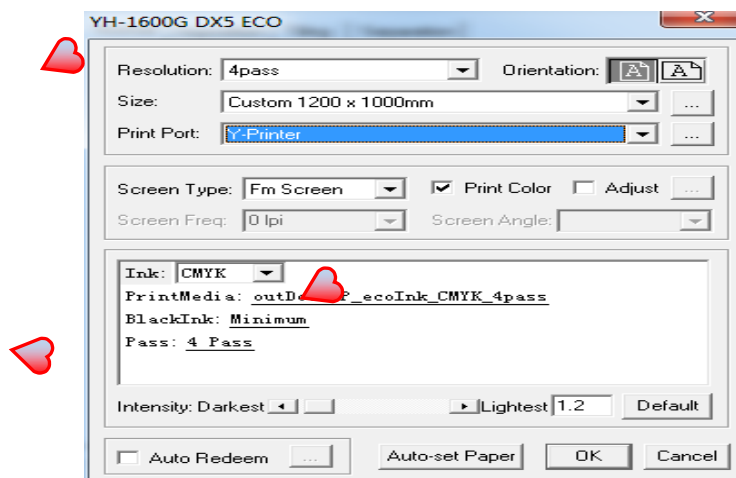


7.To

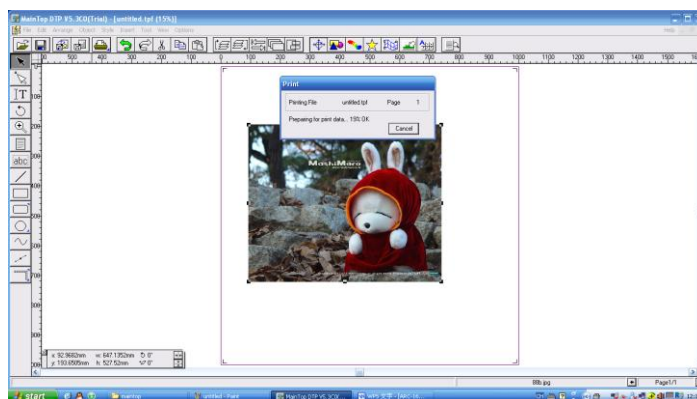
press "Print" then i will appear this window in the maintop----Properties.



8.To choose the pass (Attention: The Print Media pass should be the same as the Redolution pass.) and choose the Printer Port as "Y-Printer" ,then click Auto-set Paper .



9.Finally ,to press OK --Printting



Chapter 5 Maintenance Items

5.1 Maintenance Service

5.1.1 Guarantee clause

Welcome to buy our products. Our company in each big and medium-sized cities in China authorized agent maintenance centers. Such as a hardware failure, please contact to the nearest authorized service centers.

5.1.2Product warranty policy

- (1) The user during the warranty period for free warranty service, please contact the local agent.
- (2) If no special written instructions, we guarantee way of consumer products for the repairing service, the user the product must be sent to the nearest authorized service center. If the warranty way for on-site service, the user after contact the nearest authorized repair centers, maintenance can be for the user. After the maintenance, the user needs to keep maintenance center sign, authorized user maintenance record sheet, in case of queries.
- (3) Maintenance spare parts replacement down after all of the company.
- (4) Users need to properly keep the warranty card, the company does not reissue any warranty card.
- (5) The warranty does not include the following:
 - A. consumables (such as paper, ink cartridges, nozzle, etc.);
 - B. man-made damage or transportation damage; The damage caused by unpredictable natural disasters;
 - C. users and unauthorized service institutions themselves after the disassembly and maintenance of products;

- D. because users are using does not support medium, the use of substandard print sharing, or use is not in conformity with the provisions of the power supply failure and damage caused by;
- E. in the product of the work environment use of failure or damage;
- F. improperly secured by users (such as the rat, liquid infiltration, etc.) caused by the failure and damage;
- G. because of using the self-made or non-public software, cause the damage of the product cannot be used properly;
- H. the terms of this warranty only aims at the malfunctions of the machine itself, does not assume the resulting any joint and several liability.

5.1.3 The warranty scope

The terms of this warranty is for all over the world.

Chapter 6 The common failures and solutions

Serial No	Common fault	Fault reason	Solution
1	After the power on the machine did not react, small frame does not move	A、Socket, power cord, power box damage	Check the normal input components, ensure that the power supply box with 24V output
		B、the mother board insurance fuse	Exchange of insurance
		C、Trolley board power supply is not normal (led not bright),The motherboard or the car board is bad;	26P data cable not seated, the car or the motherboard output voltage abnormality; change the car plate or the motherboard
		D、The car motor servo anomaly	Check the servo motor and the main board connection line; servo motor abnormalities
2	The car can move, but not to return to the ink station	A、Raster signal error	Check grating bar, decoder
		B、The car just go left, single direction movement	26P data cable plugged tightly; car plate or bad motherboard; the motor connection line not connected or abnormal motor
3	The car can normally return to the station, but will hit the right baffle error	A、Zero sensor fault	Check the sensor connection line
4	Nozzle test all channel not out of ink	A、42V input exception	Check the power box no 42V output, the motherboard 42V insurance tube fuse

		B、Nozzle data cable	Check nozzle data cable
		C、Car board or sprinkler	Changing trolley plate or spray head plate
5	Part of the channel is not out of ink, or ink anomalies	A、Trolley board, sprinkler head anomaly	Changing trolley board, nozzle plate
		B、Nozzle data cable	Check nozzle data cable
6	Pumping ink motor, wiper blade, fan anomaly	A、Pump, solenoid valve abnormal	Check connection line, pump, solenoid valve, fan
		B、Motherboard bad	Change the motherboard
7	Abnormal paper	A、Motor connecting line	Check connection line, paper motor
		B、Motor drive board, main board	Circuit board
8	Boot normal, print the computer display is not online or print output	A、Do not match the IP address of the machine and the computer	Re set IP address as required
		B、Network cable, cable quality problems	The replacement of cable or cable network。
		C、Plug contact network cable ends on the motherboard and the car plate due to bad cable loosening。	To ensure that the cable plug can not be affected by the impact and towline loosening; re plug cable, check whether the loosening of the interface。
9	Figure is not finished, the data transmission is terminated	D、Car board is bad	Replacement trolley
		A、The installation disk space is insufficient	Clean up the disk space where the software is located or replaced by a large hard disk, to ensure that the space required to play the map is sufficient
10	White or overlapping appears when inkjet print	A、Step calibration did not do or do not correct。	Re alignment step; for different print media need to re calibrate step
		B、Step into the school on time and different feeding condition when the print painting (paper / state natural state), paper resistance is not uniform	Adjust the paper feeder, so that the paper is uniform. Calibration step in the same tension condition。
11	Print than the actual size of long or short	A、Step parameter is not accurate	Re calibrate the step or adjust the automatic compensation parameters in the
12	Inkjet print accuracy, ink flying	A、Head and print medium distance is too high (normal 1.8-2.2mm),	Adjust the distance from the nozzle to the printing medium
		B、42V voltage deficiency	Check power box 42V output is normal
		C、Vertical calibration of the	Re calibrate both vertical and bidirectional

		nozzle, the two way calibration is not good	
		D、 Motor speed is too fast	Adjust printing speed
		E、 Abnormal driving plate	Changing head driving plate
13	Ink breaking phenomenon of inkjet printing at	A、 Indoor temperature and humidity environment	The ink outlet of the nozzle is influenced by the environment temperature, so that the working environment temperature should be kept in the normal range
		B、 Ink quality problem	Ink for good quality
		C、 There is a problem with the ink supply system	To ensure that the ink supply pressure is normal, the ink tube and the place where the interface is not leaking
		D、 Motor speed is too fast	Adjust printing speed
		E、 Nozzle driving plate problem	Changing head driving plate
14	Color inkjet printing color	A、 Ink or ink jet ink	Ink and the Mongolian Thai printing curve is not very matching or nozzle clogging
		B、 42V lack of voltage, driving voltage is not enough	Check power box 42V output is normal
		C、 Abnormal driving plate	Changing head driving plate
15	Printing process in the wrong car, print termination	A、 Loose 26P data cable	Re plug cable
		B、 Error in servo motor	Check the connection line of the servo motor
		C、 Read raster error	Check the grating position, grating is scratched, the grating to the circuit board connection line, grating decoder