Instruction Manual

Nano 9

(The appearance of the equipment is subject to constant upgrading.)

Catalogue

Belts

Raster

Carriage

Ink tank

Ink tank indicator

X- guideway

Cap station/moisturizing pads (2-3)

Platform

Wiper

Waste ink bottle

Control Panel

Printer Power

Metal crossbar
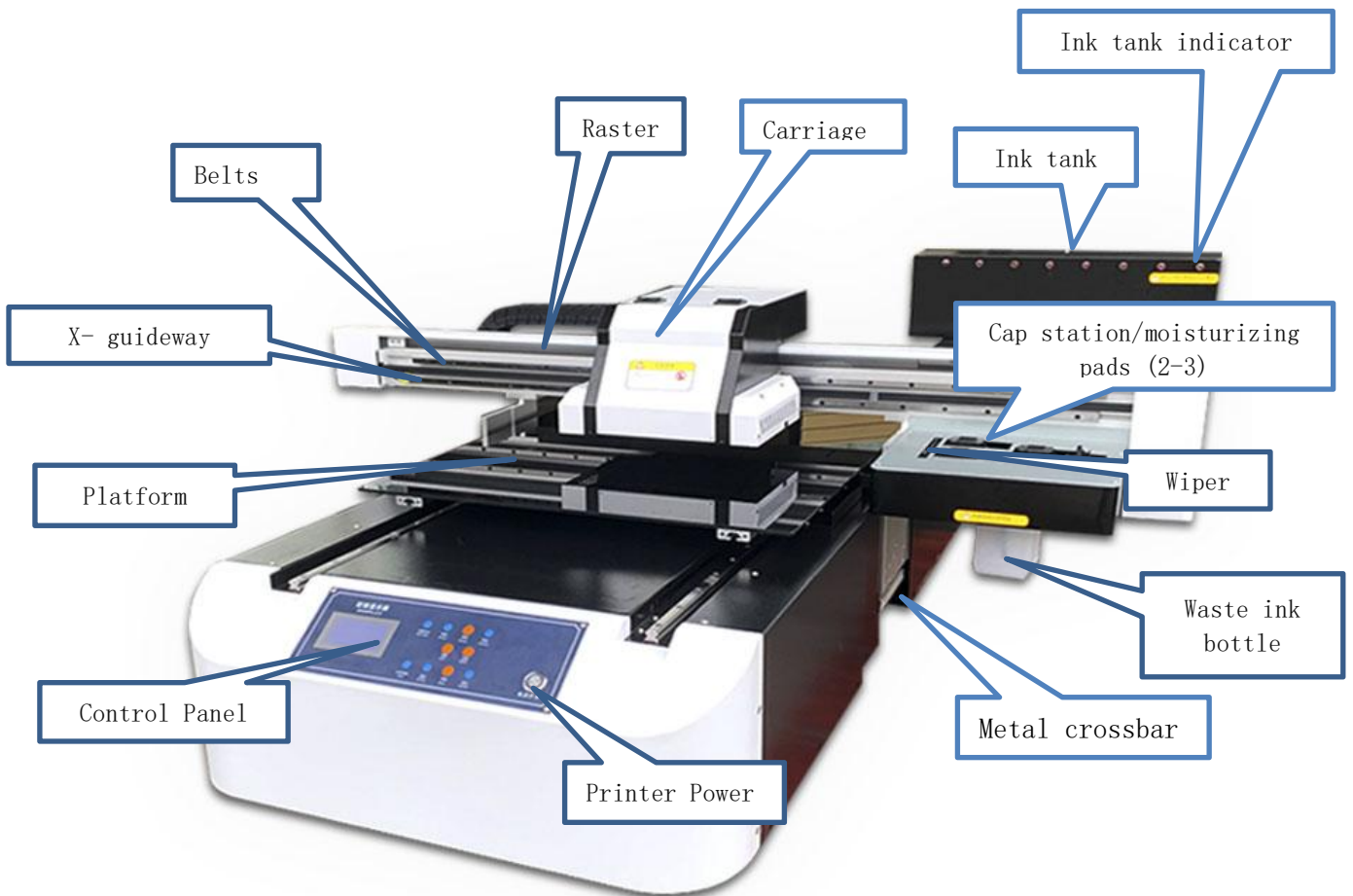
Preface

Welcome to use our equipment, we are honored to cooperate with you. In order to facilitate you to quickly grasp the use of our equipment, we have prepared this manual. We have tried to make the product manual comprehensive and clear. We hope that this manual will provide you with knowledge about equipment configuration, hardware connection, software installation and use. We strongly recommend that you read the manual and the video tutorial carefully before installing our printer, as it will help you to use the printer better.

We try our best to avoid human error to ensure that the information provided in this manual is correct and reliable, but we can not completely guarantee: there will be undiscovered or unchecked errors, please bear with us! At the same time, in order to improve the performance and stability of the system, we may make some minor adjustments to the hardware or software of the system, which may lead to some inconsistencies between the actual situation of the system and the manual, but this will not substantially affect your use of the system, please understand. If you have questions or problems in using the system, please contact!

Thank you for your cooperation!

This manual describes the printer's features, part names, information to know before using the device, and basic operations, such as how to power up and power down, and how to set up print materials and ink.

The Company reserves the right to modify the technical descriptions

and contents of this manual without notice, and shall not be liable for any damage (including causal damage) caused by reliance on the contents of this manual (including typographical errors, calculation errors, and listing errors).

Chapter 1
Safety Precautions、Routine Maintain

1. Security guidance

To ensure safe printer operation, please read the following instructions before using your printer and obey the warnings and instructions marked on the printer.

⚠️   Do not use damaged cables.

⚠️   Do not use wet hands to dial the power plug and switch.

⚠️   Do not touch the bottom of the ink curing unit with your hands.

⚠️   Do not keep your eyes on the UV LED light when using the UV printer, wear UV protection glasses if necessary.

⚠️   Do not block the openings in this printer housing.

⚠️   Do not insert any objects into the printer slots and be careful not to spill liquids into the printer.

⚠️   Connect all equipment to a properly grounded outlet and avoid using outlets that are on the same circuit as copiers or air conditioning systems that switch between on and off on a regular basis.

⚠️   Avoid using outlets that are controlled by wall-board switches or automatic timers.

⚠️   Keep your computer system away from potential sources of electromagnetic interference, such as speakers or cordless phone stands.

⚠️   Do not use damaged or frayed power cords.

⚠ If using an additional power cord, remember that the total amperage of the devices plugged into that additional power cord should not exceed the amperage rating of that power source, and also remember that the total amperage of all devices plugged into the wall should not exceed the amperage rating of the wall outlet.

⚠ Do not attempt to repair the printer yourself.

⚠ In the following cases, please ask experienced maintenance personnel to maintain after cutting off the power supply.

If the power cord or plug is damaged.

If liquid is spilled into the printer.

If the printer is dropped or the case is broken.

If the printer does not operate properly or has a significant change in performance.

2. Precautions when using the printer.

⚠️ Do not move the print head by hand without disconnecting the power, as this may damage the printer.

⚠️ Always use the power switch to turn off the printer. However, when this key is pressed, the power will be cut off. Do not unplug the printer or the data cable until the power has been disconnected.

⚠️ Before moving the printer, ensure that the print head is in its initial position and secured, and that the transport crossbar is loaded back and the crossbar is pressed on.

⚠️ Please keep the ink bottle out of the reach of children and do not allow children to touch or drink the ink bottle.

⚠️ If the ink sticks to the skin, rinse with soap and water. If ink is splashed in the eyes, rinse immediately with water and consult a physician.

⚠️ Do not shake the ink bottle, this will cause the ink to leak.

⚠️ Place the printer on a horizontal, stable platform that is larger than the printer. If the printer is tilted, it will not perform normal operation.

⚠️ Avoid areas where the temperature and humidity are prone to drastic changes. Avoid exposing the printer to direct sunlight, bright light, or heat sources.

⚠️ Avoid areas that are prone to vibration or shaking.

⚠️ Leave enough space around the printer to ensure proper ventilation of the printer.

⚠️ Place the printer close to a wall outlet to make the plug easy to plug in and out.

⚠   The best temperature for its work is 20℃～25℃, and the best humidity is 10%～20%.

⚠   Power outlets must use outlets containing ground terminals, and the ground wire should use the cable containing copper and be buried underground at least 650mm. The printer and the computer are connected to the same ground to avoid circuitry loops that could cause interference. The computer power supply should be connected independently and in front of the printer power supply. And more than 10M apart. In order to avoid power grid impact and voltage frequency fluctuation affecting the operation of computer system, resulting in crash. A 220V 10A noise filter is installed in front of the power supply to filter the power supply interference noise.

⚠   Do not stand or place heavy objects on the printer, let alone place upside down, do not cover the printer vents with cloth, do not use damaged cables, and do not use wet hands to dial in the electronic plug.

⚠   Please turn off the power and disconnect the connection cable before cleaning the printer, and keep the printer level during transportation.

⚠   Do not disassemble the case,head internal motherboard and power supply at will.Do not plug and unplug the electronic plug.

If the customer's site conditions and environment cannot meet our requirements,the customer will be responsible for all losses incurred during the operation of the equipment.

3. Routine inspection and routine maintenance

3.1 Routine inspection

- Check that the guideways are lubricated before using the printer each day.

- Check daily whether the ink sac of the print head is well connected with the print head.

- Check daily that the raster is intact and clean.

- Everyday we need to click the 'tset' button on the control software and print a test bar to check the print head status. Test bar is used to detect whether the nozzles are blocked, each of its small short line corresponds to a row of nozzles.Short lines with multiple missing lines are called 'broken needles', and those with fuzzy lines are called 'vague needles'.

- Before printing, please check that the material is properly placed so that the print head is not scratched during printing.

- Before and after each print, please print a test strip, check the status of the print head and clean it promptly.

- Please use this printer only after professional training, otherwise unpredictable problems will occur.

- Check daily whether there is ink at the bottom of the UV LED light, if there is, please wipe with alcohol, and clean it regularly.

- Check daily the print head connecting wire connected to the print head for ink and take care to clean it promptly (if ink has flowed into or corroded the print head connecting wire, replace it before using the machine)

3.2 Rountine maintenance

- Clean the print head cap daily, such as the print head carriage, waste ink tank, wiper, etc.

- When the test status of the print head is not good, please clean the print head and do it under power off, and use the original cleaning fluid to clean, do not use other liquids to clean the pipeline or print head, otherwise the machine will be completely unusable.

- When the printer is not used for a long period of time to produce, it should be turned on at least once a day and print a test strip to test status of the print head and print a small chart after confirming that it is intact. Then moisturize according to normal procedures.

- Check the ink condition frequently and add ink in time. When the ink level in the ink cartridge is too low, the liquid level on the ink cartridge turns on red. Look at the indicator light corresponding to the ink cartridge, and then add ink to the black cartridge with the indicator light on until the light goes off (each ink cartridge corresponds to an indicator light).When the ink is stored below 0 ℃ after freezing, or due to low temperatures in the outdoor transportation after freezing, the ink should first be placed in a room temperature environment for at least 24 hours, until it returns to normal before use. If the ink is moved from a cold place to a hot place, condensation will occur. Only use the ink after it has been left in a normal environment for at least 3 hours and the condensation has disappeared.

- Keep the raster and track to clean, do not make the raster stained with ink, cleaning fluid and other stains. If the raster is stained with a layer of gray, etc., wipe with alcohol. After cleaning the track, apply a thin layer of grease or lubricating oil to the track. When doing this, please be careful not to touch the raster.

3.2.1 Cleaning and maintenance of print head

- Print head cleaning: when the printing status bar of the print head shows a broken needle and a vague needle, the print head should be cleaned in time. When cleaning, you can click the "cleaning" button of the software and then select normal or deep automatic cleaning print head(generally select normal).

- Print head maintenance: when the end of the printing machine for a long time without the need to moisturize the print head, and then in the shutdown; moisturizing through: close the printing software (print head and ink pad together tight must be confirmed) - and then turn off the printer power can be.

4. Other notes.

- During normal use, the printer should not be moved back and forth, placed on heavy objects or lying on top of the platform. The printer should be fixed in a certain position and kept level.

- If the media accidentally scratches the print head while printing, immediately press the pause button on the control panel or the pause option on the software, then readjust the height on the software and click to continue printing. (Note:If the print head collides seriously, please directly turn off the machine power and then restart to test the print head status, adjust the height, and then print again.)

- If the printing effect is not good, please check the ink output of the printing head and calibrate the gear ratio and step of the printer. If it is bi-directional printing, please carry out bi-directional calibration mode. These items are very important. If there is no problem with calibration, please contact the technical support engineer.

- When the equipment is not used for a long time, the test strip should be played every day to detect the condition of the print head to prevent clogging. If there is any clogging, it should be cleaned in time. It is better to make some small drawings every day.

- In the process of daily use, the printer should be kept clean, especially the work platform should not have debris.

- Always clean the wiper and ink extraction pad. When cleaning, move the trolley to the left home position before cleaning. When cleaning the wiper, wipe it with a lint-free non-woven fabric (Note: Please do not squeeze hard to avoid damage and deformation of the squeegee).

5. Consumables related.

- Recommended consumables (printing materials, ink, accessories, etc.) should always be used; otherwise, poor print quality or a non-functioning printer may result.

- Do not use expired ink, otherwise the printer may not work.

- Used ink tanks should be placed in plastic bags and disposed of as industrial waste. Please check the legal regulations related to the disposal of used ink bottles.

- Do not get the ink on your skin or clothing. If you do get it on, rinse it off immediately with soapy water.

- Check the waste ink bottle regularly to prevent waste ink from leaking out. (Note: The ink in the waste ink bottle should not be reused.)

- When loading and taking out the waste ink bottle, you should lay down anti-staining paper to prevent the spilled ink from getting on the floor.

- The ink should be stored in a cool, dark place. It is forbidden to store the ink in high temperature or in direct sunlight. Otherwise, the characteristics of the ink may change.

Chapter 2

Installation and Use of Software and Machine

1. Installation of the software

1.1 PrintExp Print Control Software Installation

Download/Copy it from a USB flash drive or the website provided and put it inside your computer disk. Open the file InkDream and find the folder name usb device to install USB driver, and then find the folder name vc-runtime file inside the program also need to install.

Once installed, find the icon and right-click to send it to the desktop shortcut.

Next we need to install the software.

Double click to open Ultraprint to find the folder name VC-runtime as shown to install VC.After

the installation is completed, find the icon and right click to send to desktop shortcut.

2. Foundational installation of equipment

First place the machine horizontally, ensure that the table is stable, and check whether the machine is in good condition. If there is any abnormality, contact our company.

(1) Connect the USB and power cables on the machine

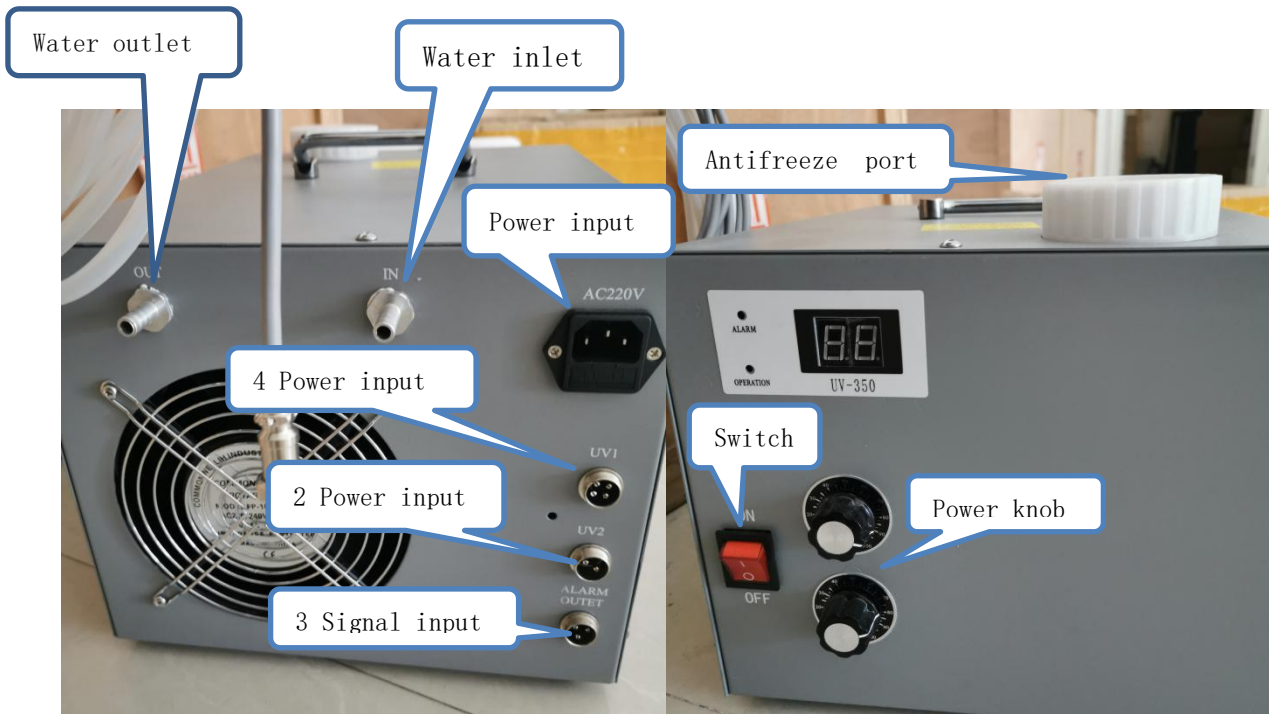(2) Connect the water pipe, light line and signal line of the machine to the water tank.

(3) Add the refrigerant to the water tank (Do not spill it).

(4) Open the power supply of the water tank and observe whether the water circuit is smooth. If there are abnormalities and alarms, please contact our company.

(5) Startup steps: Turn on the main power supply at the back of the machine, and confirm that the platform is free of foreign objects: manually move the front of the vehicle to the middle, and then turn on the front power supply until the display screen shows that the equipment is ready for startup (Remember every point in the startup steps).

(6) Shutdown steps: Turn off the printing software first -- turn the head back to its original position, and then turn off the power supply.

(7) After opening the software, first move the machine head up a bit, then remove the transport bar, the screws back. If it needs to be transported later, install the transport bar before transportation.Illustration, (The picture is for reference only, and the machine appearance may vary slightly in different periods)

Demolish the metal crossbar and replace the screw

USB and power cable

Water outlet

Water inlet

Antifreeze port

Power input

4 Power input

2 Power input

3 Signal input

Switch

Power knob

After the printer is turned on: Double click the icon on the computer and wait for the machine to initialize, as shown below.
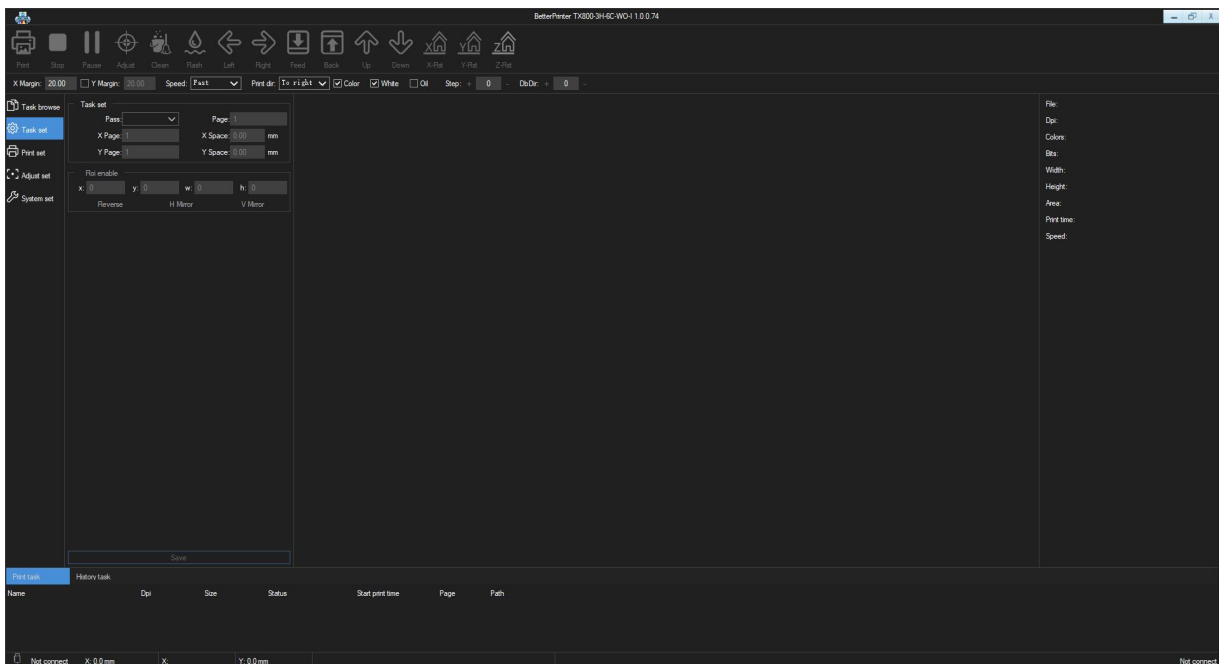
3. Tool bar
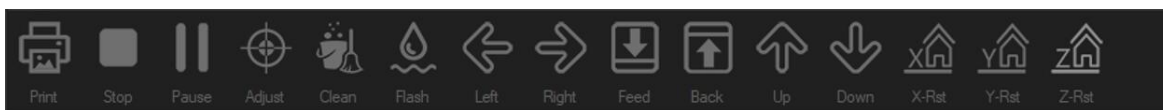
From left to right:

(1) Print: Execute the command to print the current job

(2) Stop: Cancel printing the current job

(3) Pause: Pause the current print job during printing

(4) Adqust: The test button is divided into 2 sub-options but only sub-option one is needed (status diagram of the print head)

(5) Clean: To clean the print heads,just select common cleaning

(6) Flash : the flash spraying switch at the origin position of the nozzle (it is on by default, generally do not click it)

(7) Left : Print head carriage moves to the left

(8) Right : Print head carriage moves to the right

(9) Feed: Print carrier advance

(10)Back: print carrier back

(11）Up

（12）Down

（13）X-Rst: the carriage returns to the initial position

（14）Y.Z-Rst is not available ,remember

Then we click,left 、right 、feed、back、 up、 down， click to have a response

4. Ink refill

（1）The cover of the ink cartridge is marked with letters W white G varnish Y yellow M red C blue K black LC light blue LM light red. Add color by number. Open the cover one by one and add ink. Do not add wrong ink. Shake it well before adding ink and then pour it into the ink bottle. Figure 1

（2）Through the software "print settings - ink injection - select all click to start - Figure 2 (start ink injection before finding the right waste ink bottle), to be 1-2CM of ink in the waste ink bottle and then click to stop.
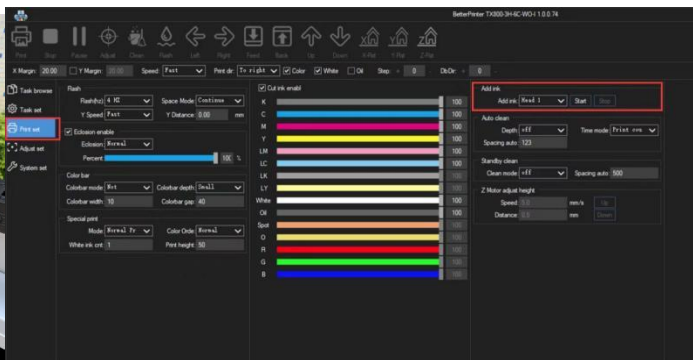

Figure 1   Figure 2

After the ink is pumped out, through the software cleaning function, select ordinary cleaning, all cleaning, 1-2 times, (put a blank A4 paper in the head position - as shown in Figure 3 below) Then adjust the printing height, the print head from the printed object spacing of about 2MM,

about the spacing of a coin.

（3）Height adjustment method: First move the printed object to the red line position in Figure 3. If the product is higher, it can rise to the front of the vehicle without hitting the product, and then click to left shift, the front of the vehicle will move out slowly, and then adjust to the appropriate height through {print setting - Z axis adjustment height - up or down} in Figure 2 (the distance between the product and the nozzle surface is 2MM left) -- as shown in Figure 4 -- click to reset the X axis.
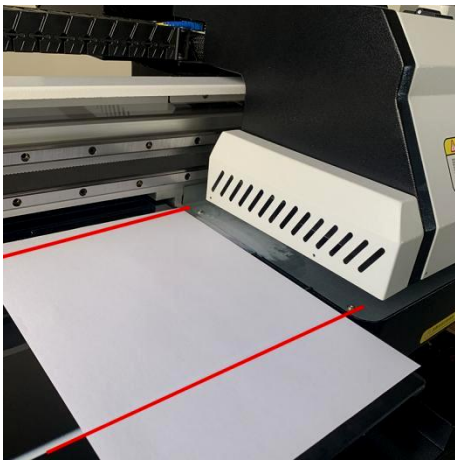

Figure 3

Figure 4

（4）Print heads status (to check before printing products every day):After adjusting the height - check the Y white edge to cancel - click the test - print heads status, the effect is as shown in Figure 5. Each color block is clear and the lines are complete (if there are many broken lines, it needs to be cleaned or inked for about 40 seconds and then cleaned twice, at last print the diagram of print heads status until it is normal), (the white and varnish status can be seen only when it is printed on the glass table or transparent material).
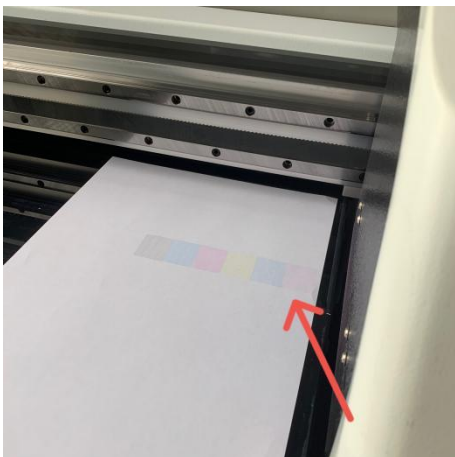

Figure 5

1. Notes for printing materials

(1) Pay attention to the distance between the material and the print head, the operation will lead to damage to the print head.(non-warranty parts) (the optimal printing distance is 2mm between the print head surface and the middle of the plane of the object to be printed)

(2) Positioning according to demand.

(3) Materials that need to be coated should be coated as required.

(4) Print materials that match the print size of the machine:If the ink recommended by the machine manufacturer is not used, the print quality may be reduced or the printer may fail. The validity period of the ink is 12 months (from the date of production).

(1) For the long-term storage of ink, please lightly shake the ink barrel until the ink is even before use.

(2) It is forbidden to put the ink near an open flame, otherwise, it may lead to a fire.

(3) Do not swallow the ink and also avoid splashing it in eyes. If ink is splashed in eyes, flush with clean, running water and seek medical help when necessary. In case of swallowing ink, do not force vomiting, but seek medical attention.

(4) Notes on disposal of waste ink bottles:Please place waste ink bottles safely and securely in plastic bags and dispose of them as industrial waste. Please check the legal regulations related to the disposal of waste ink bottles.

(5) Ink has an expiration date for use. When expired ink is used, the print quality of the printer may deteriorate and the printer may malfunction as a result.

(6) Keep the cartridges in a dry, cool, dark place and always use the recommended consumables (e.g., printing materials, ink, etc.); otherwise, poor print quality or a non-functioning printer may result.

Ultraprint   Instructions for printing and typesetting software

Double-click to open the icon ![UltraPrint] to open the rip typesetting software.

1. Interface description

Printer settings:

Click the **"Canvas Settings"** menu item in the **"File"** menu, the program will pop up the canvas
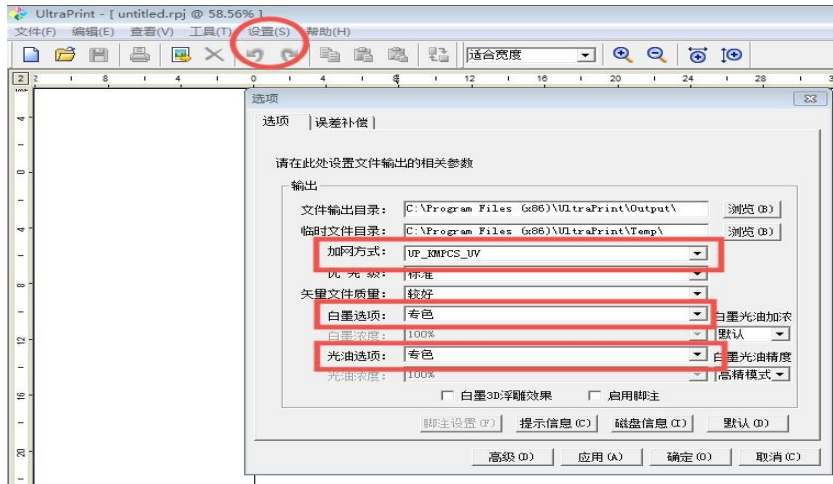
settings dialog box, as follows.

 Canvas width: 60CM, Canvas height: 90CM,   click OK

2.   Menu bar - Settings - Options

File output directory: Set the default output directory for print files

Screening method: UP_KMPCS_UV, white ink option: spot color, varnish option: spot color

Set it up and click OK

3.   Printing process

(1) The production of positioning lines and pictures (the following Photoshop cc for example is much the same)

Please watch the video for the creation of positioning frames and picture.

(2) First open the software (UltraPrint), click New File (Ctrl+N), click File to place the image, and then click Print (the first print should be set once, as shown in Figure 1 below, the precision is consistent with the suffix of the ICC profile, the color is CMYKLCLM, and only the ICC profile that supports the current print mode is unchecked), at last click Print, and name the file .
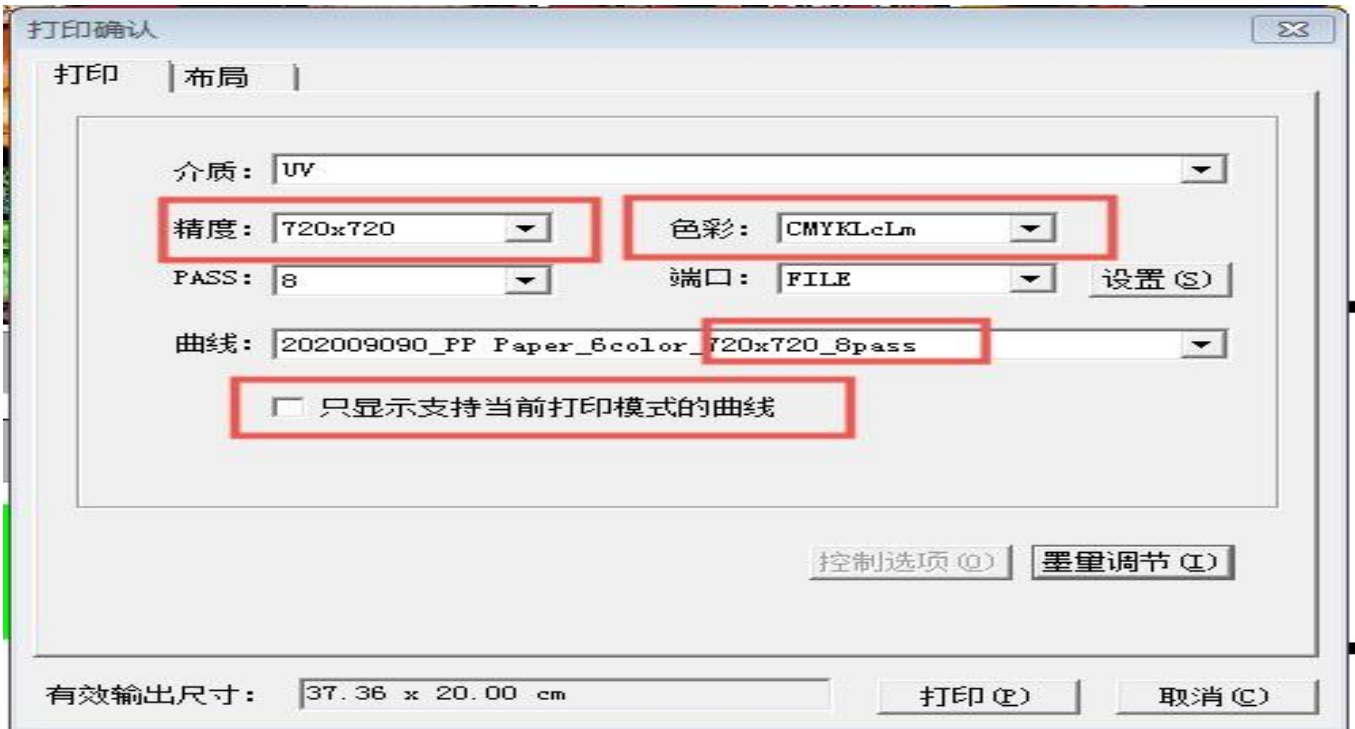
In the print control software, click Task Browse (Find the disk where the data is copied, output under the UltraPrint file. The default directory of the task can be set to the folder where the rip file is saved, so there is no need to open and search again)In the preview box below, find the picture to be printed (the named file of the previous rip), double-click it, observe the task settings, and select the PASS mode correctly. If you need to print multiple identical pictures, you can edit them in the properties.
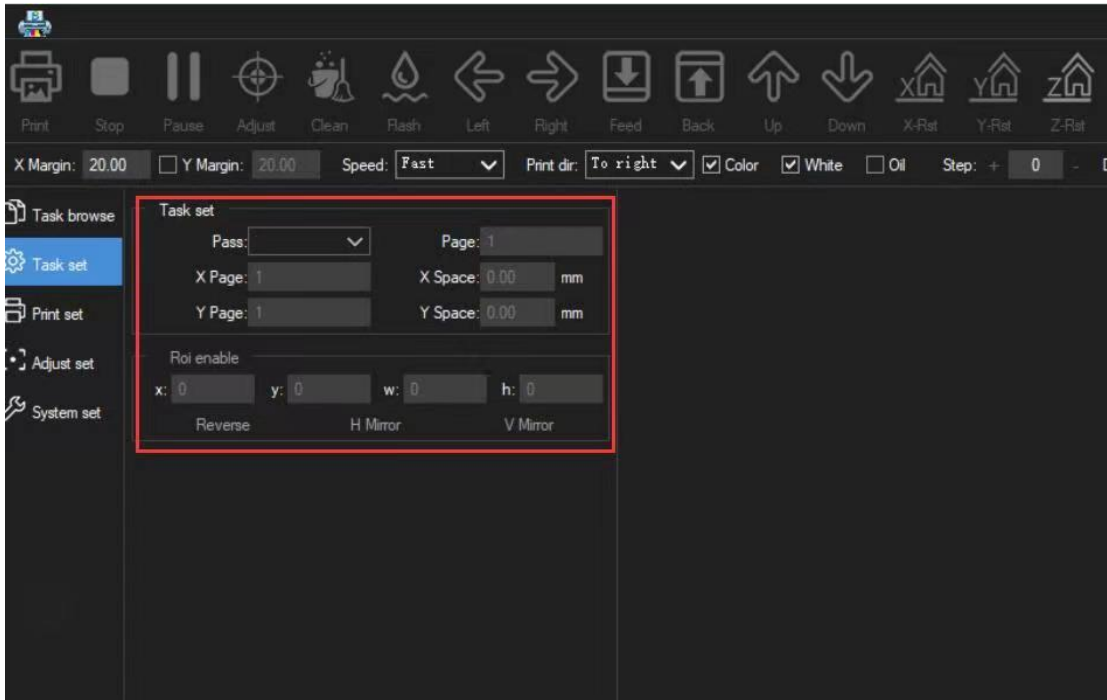
[Print task]: First set the print position X white edge 20, Y white edge 50 (subsequently adjustable), print products Y white edge check, print nozzle state unchecked. Adjust the printing height (If printing on the platform, the platform is the printed object. First move the head up to ensure that the head will not collide with the printed object when moving out, and then click left to observe the distance between the surface of print head and the printed object. In the print setting - z-axis height, press up or down to adjust the spacing to 2MM, that is, the thickness of one coin. It can also be higher, but must not be touched, otherwise the print head will be damaged.) Set the height and click the X reset, click the taskbar file, select Print, the machine will start to print work. As long as the value of the X / Y white edge does not change, the printing is always at the position where it is printed. Put the products well, and print any products must be aligned with the height. If multiple products are printed, they need to be typeset in UltraPrint and printed on the platform, then placed one by one.

If you have any questions, please contact us in time.
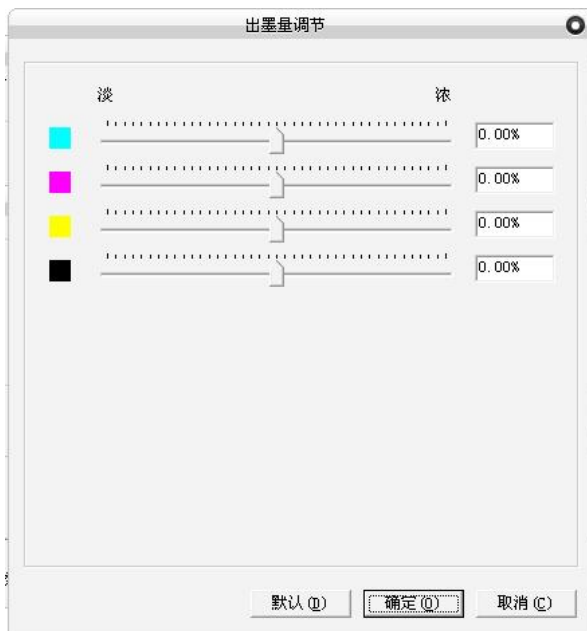
CHAPTER 3
Colour Mixing

1. Accurate overlap between color and white ink

Take the printing direction: "one-way right" as an example: print out the following image on the left (==facing the machine is right, and the front is exposed==),which needs to make the following adjustments: The"horizontal print head 2"and vertical value are reduced,then slightly changed according to the actual deviation. Generally, by default, only 1-2 values need to be fine-tuned. After adjustment, click Save and continue printing until the color and white ink coincide. (Note: The printed figure may be different from the one described above. Please adjust it according to the above method and actual situation.) In simple terms, the horizontal value becomes larger, the color moves left.The vertical value becomes larger, the color moves down. For example,the printing direction is "one-way left",the horizontal direction is changed to the left, and the vertical direction is consistent.
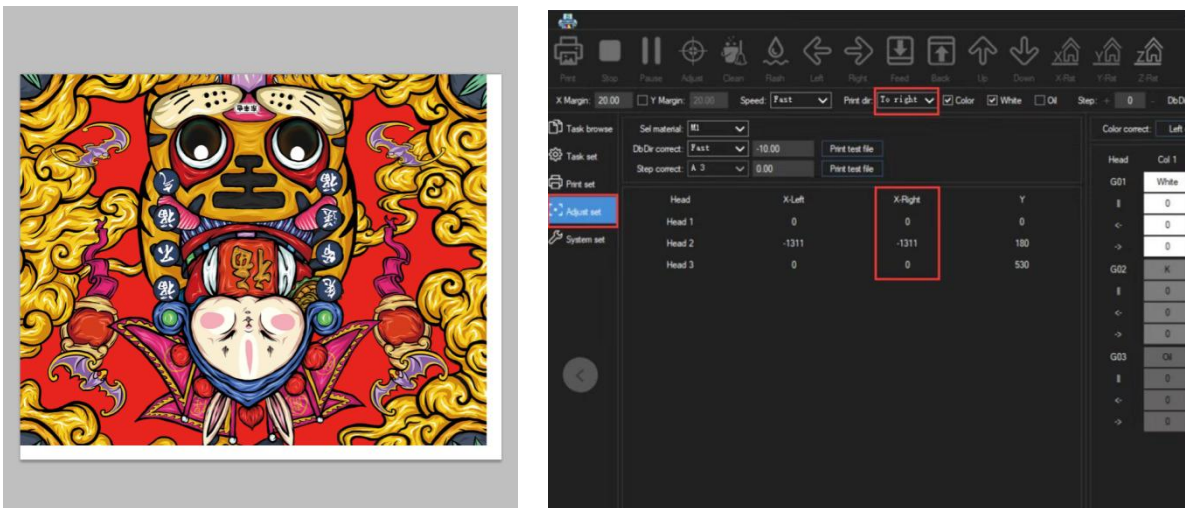
How to correct the color deviation in printing: We often encounter problems due to the picture itself,or different inks,curves and other reasons resulting in a relatively large color deviation,which we can adjust themselves through the print settings.
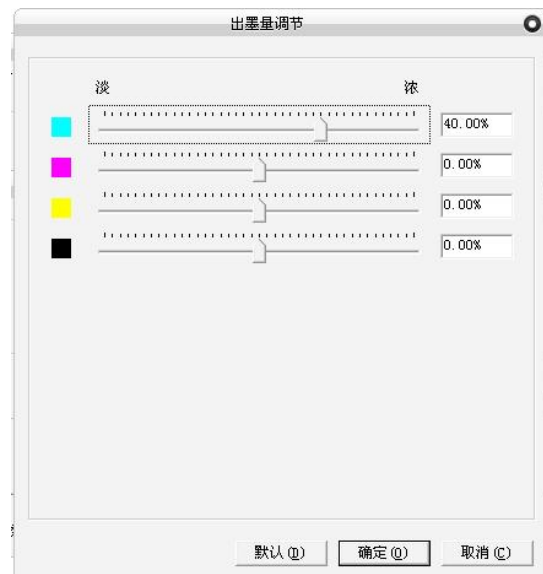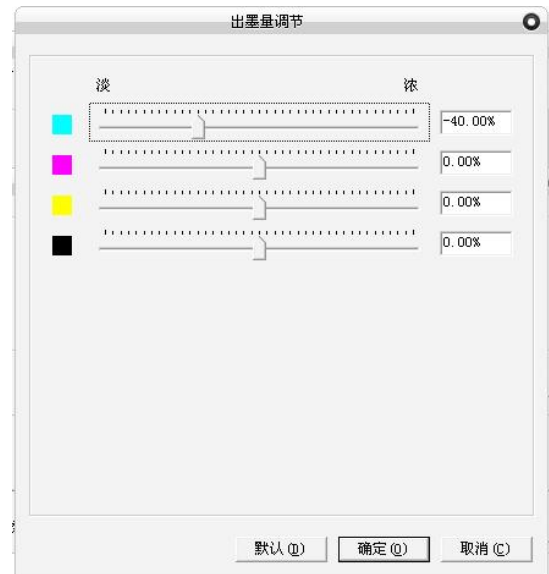
打印确认

打印 | 布局

介质：[_____] ▼

精度：[草图] ▼   色彩：[CMYK] ▼

PASS：[4] ▼   端口：[FILE] ▼   [设置(S)]

曲线：[MC 4 1 草图 1]

出墨量

淡   浓

[colorbar] [════════════════════════════════]   [0.00%]

[亮度调节(B)]   [分量调节(S)]   [默认(D)]

[确认]   [取消]

Original image

set add cyan = image reduce red   set add magenta = image reduce green

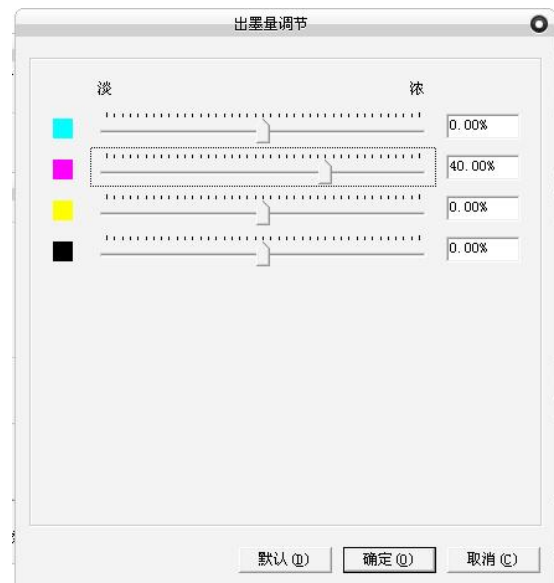set add yellow = image reduce blue set reduce cyan = image adds red
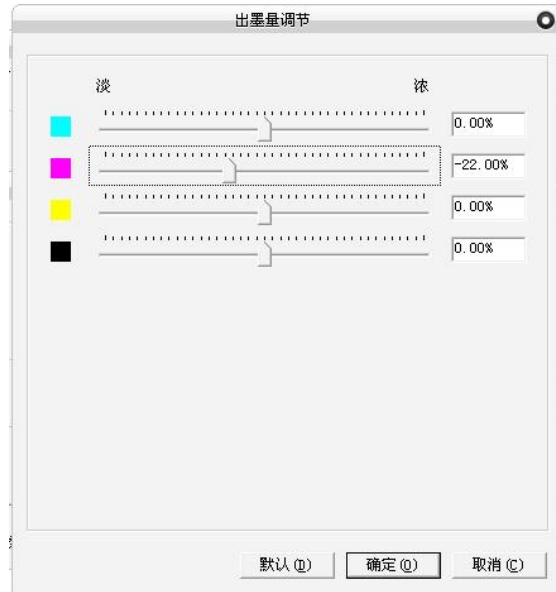
to see a set of examples.

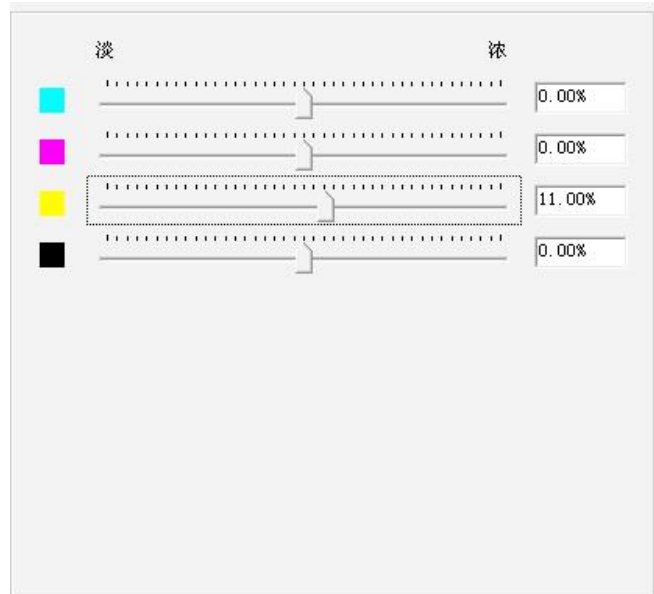If the image is reddish, add cyan in the settings.

出墨量调节

淡 　　　　　　　　　　 浓

-40.00%

0.00%

0.00%

0.00%

默认(D)　确定(O)　取消(C)

If the image is cyan, reduce the cyan in the settings.

出墨量调节

淡 　　　　　　　　　　 浓

0.00%

40.00%

0.00%
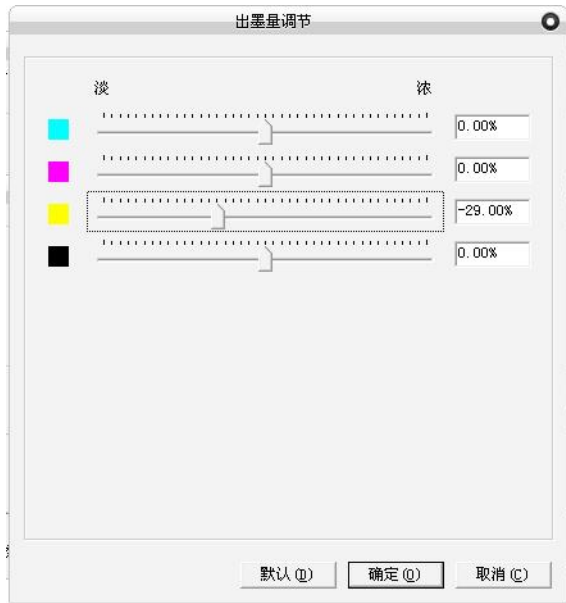
0.00%

默认(D)　确定(O)　取消(C)

If the image is greenish, add magenta in the settings.

On the contrary, if it is partial to magenta, reduce the magenta.

If it is bluish, add yellow.

If it is yellowish, reduce the yellow.

For example: add cyan and magenta = add blue = reduce yellow

add magenta and yellow = add red = reduce cyan

Of course, the color deviation of the image is not so simple as reddish or yellowish. Due to the ink, the color deviation of the image needs to be adjusted. In fact, it is to adjust the white balance. The white balance is divided into light balance and dark balance, that is, whether the brightness component is pure white when the value is large, and the dark balance is whether the brightness component is pure black when the value is small, otherwise there will be color deviation; However, the color deviation of the ink is relatively small, and there is no need to adjust the brightness and dark balance separately.

TV, monitor, camera, etc. must be adjusted.