


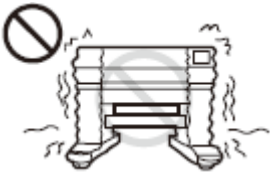
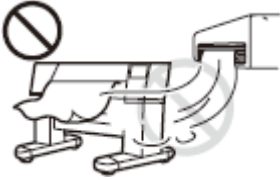
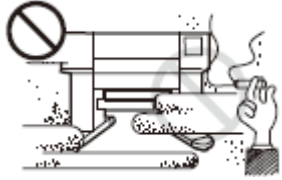

USER MANUAL ARTEMIS 1621



Thank you for purchasing Artemis series Eco solvent printers!

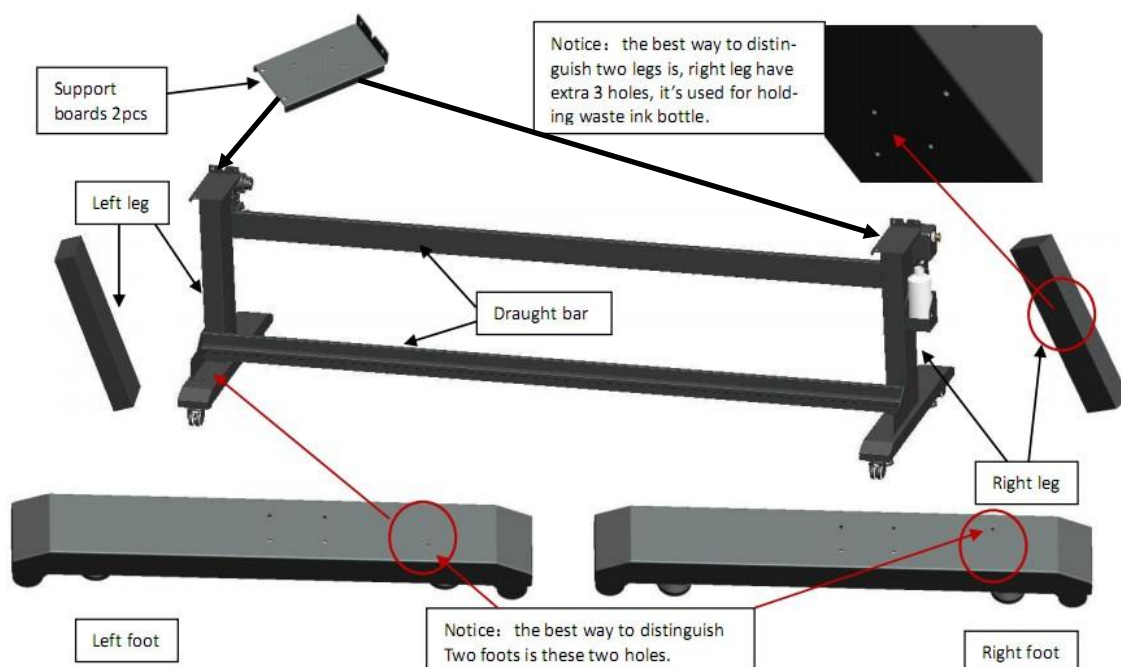
Section 1. Body Installation

1. Precautions before installation

Caution		
Do not put in the place where exposed to direct sunlight!	Do not put in the place where is not smooth!	Following the below temperature and humidity!
		 Use the device under the following environment. Operating environment: 1. 20~35°C(68~95°C) 2. 35~65%Rh
Do not put in the place where always vibrate!	Do not put in the place where exposed to direct air blow from air conditioner, etc.	
		

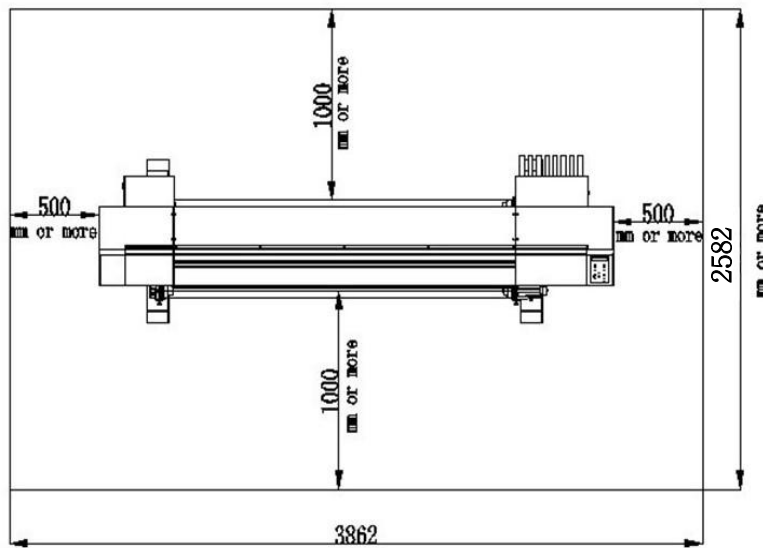
2. Printer Assembly Diagram

Please assemble the printer body according to the diagram below:



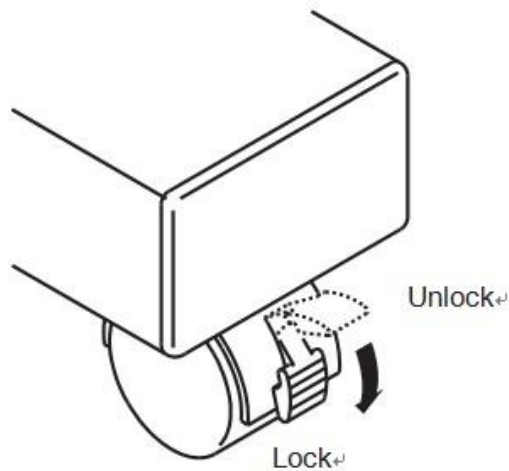
3. Choose the right place to install the device

Please find a suitable place to install the machine, make sure the space is big enough, and also pay attention to the temperature and humidity to be suitable for the normal working of this machine.



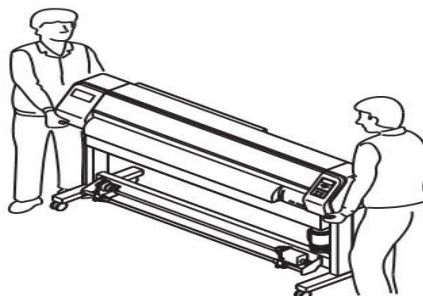
4. Locking/unlocking the lock on the foot.

As the picture shows below:



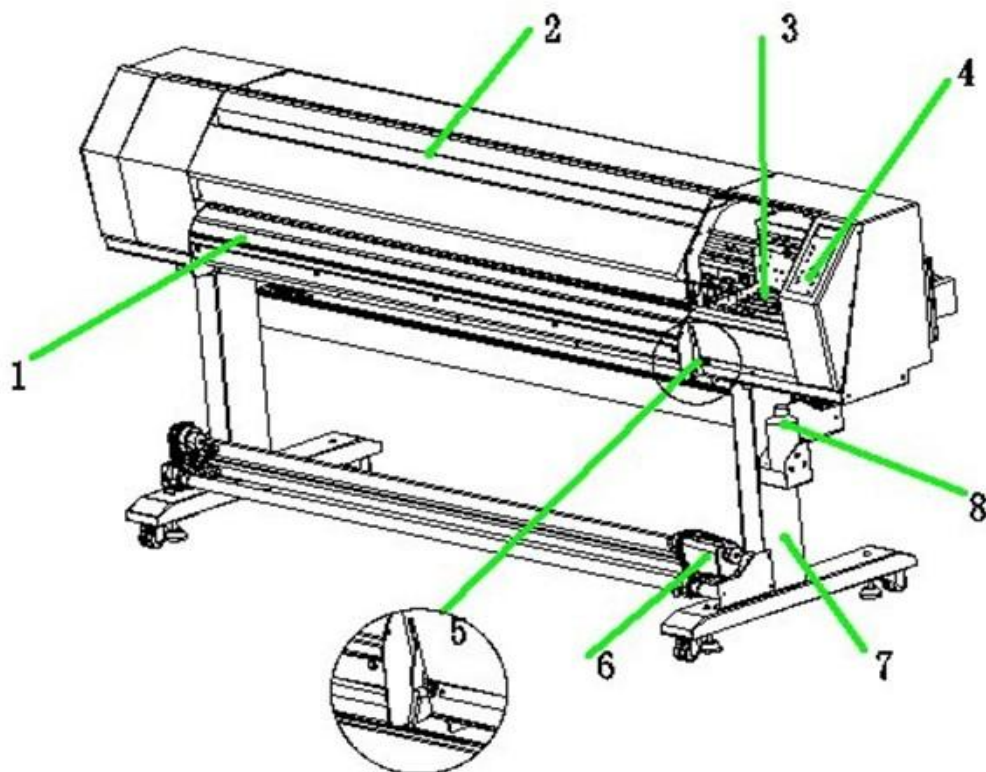
5. Method of moving the device

We suggest to move the printers by at least 2 peoples.



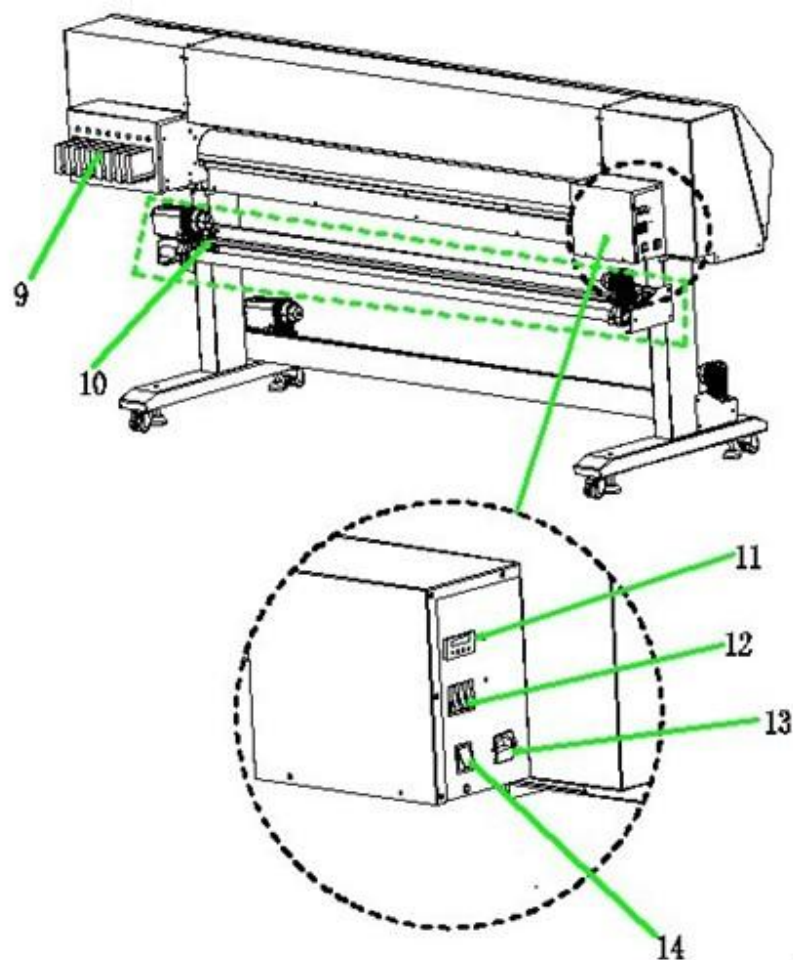
6. Configuration and function

Front Side: as the picture below:




No.	Name	Function
1	Rear Heater	Heating the printed image
2	Front cover	Protect the other people touching the printer, and also good for looking.
3	Carriage	Moves the print head from side to side.
4	Operation panel	Calibrate the printer, and the daily operation usually through this operation panel. This is the most use parts.
5	Clamp lever	It is made to go up-down the pinch roller for holding medium.
6	Take-up device	To roll up the printing media.
7	Stand leg	It supports the main unit. It is provided with casters that are used to move the device.
8	Waste ink tank	Waste ink gathers in this tank.

The Rear side:



	Name	Function
9	Ink cartridge	Contain the ink to support printing
10	Roll holder	Hold the media, ensure the stable media feeding!
11	Heater operation panel	Provides the heater power switch and the heater status LED indicator.
12	Heater switch	Control front, middle, rear heater.
13	AC inlet	The power cable is connected to the AC inlet.
14	Power switch	It turns on/off the power to the device. When the power switch is turned on, the POWER indicator lights in red.

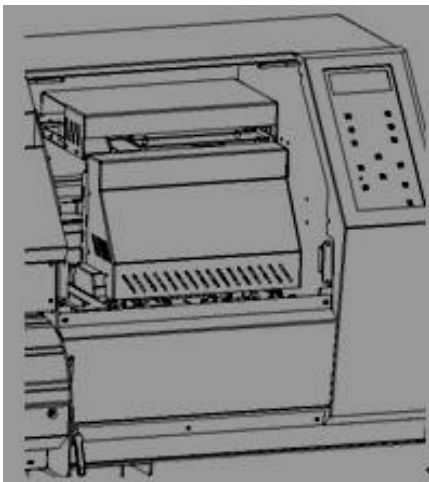
Operation Panel Keys Introduction:



Print quality	Eclosion, it have 4 level:off,weak,normal,strong
Cancel	Cancel printing work
Cleaning	It's a shortcut menu for cleaning, and this function will run as you set in panel
Pause	Pause printing work, press again will go on to work
Function	Not enabled(back up for higher function)
Base point	Set print origin
Menu	Enter to the setting function.
Enter	Confirm your setting(always used key)

7. Printhead & Capping Station

As the picture below, the printhead was installed in the carriage.



Capping station



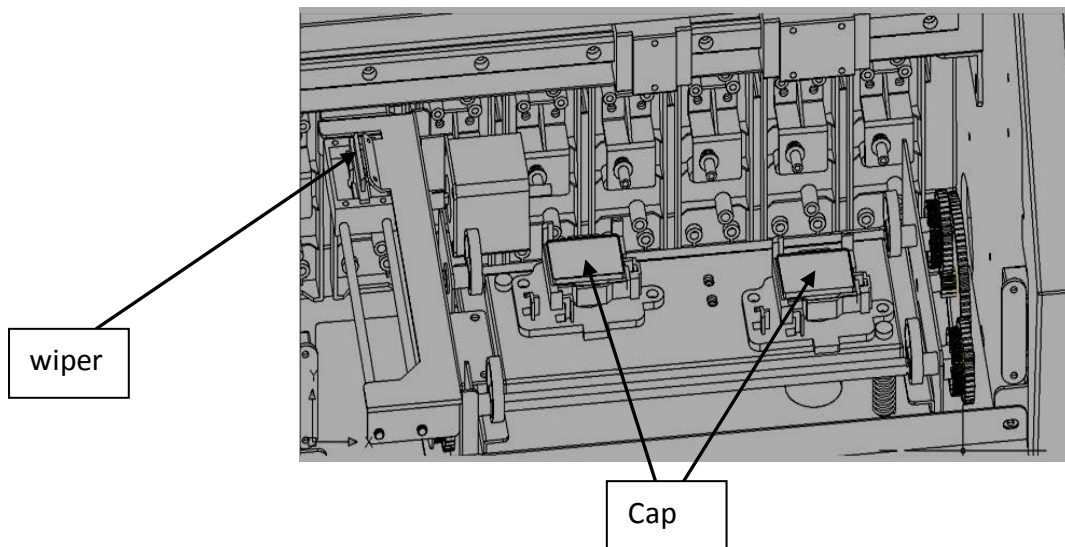
- When cleaning the capping station, be sure to wear the supplied goggle and gloves since you may get ink in your eyes.

The capping station consists of ink caps, wipers for cleaning the heads, etc.

Cap : It covers the nozzle so as to prevent the head nozzle from drying up.

Wiper : It is used to clean the head nozzle.

The wipers are consumable parts. If the wiper is deformed or the medium is stained, replace the Wiper with a new one

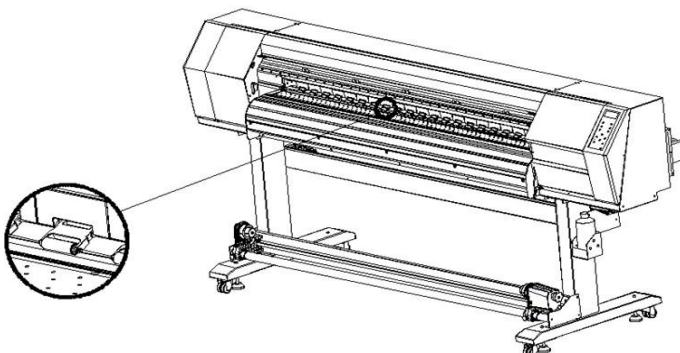


The pinch roller and The feed roller



- While the device is not being used, keep the pinch roller in the upper position. If the pinch roller is left lowered for an extended period of time, it can deform and fail to securely retain the medium.

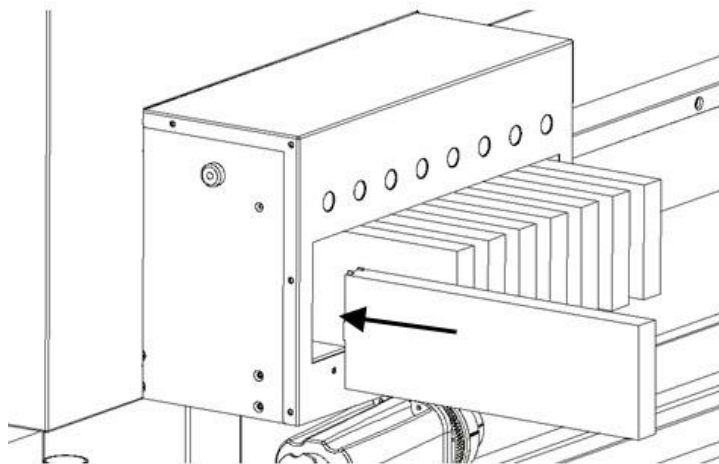
This device retains a medium with the pinch roller and the feed roller. During plotting operation, the feed roller feeds the medium forward.



8. Ink cartridge

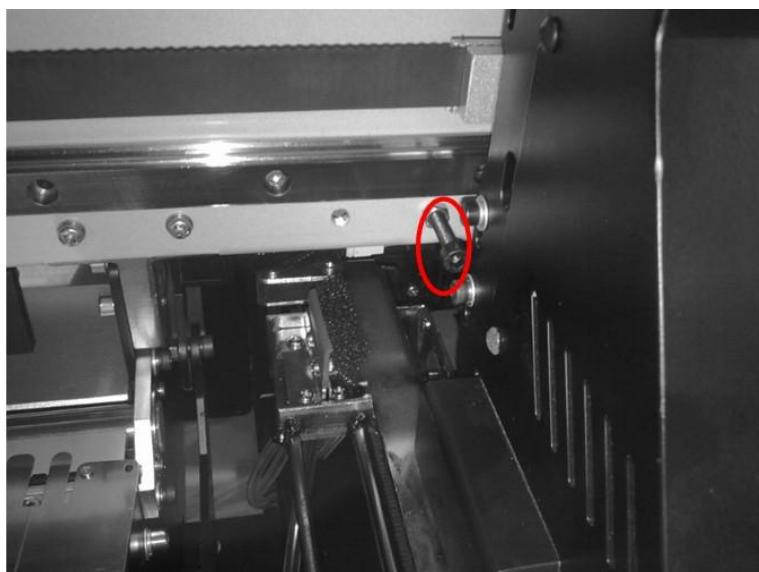
Before you using ink cartridge, please clean it with professional cleaning solution, insert them from left to right, the color sequence for 1 head should be: **K**、**C**、**M**、**Y**.

While the color sequence for 2 heads should be: **K1**、**C1**、**M1**、**Y1**、**K2**、**C2**、**M2**、**Y2**



9. Prepare to use this machine

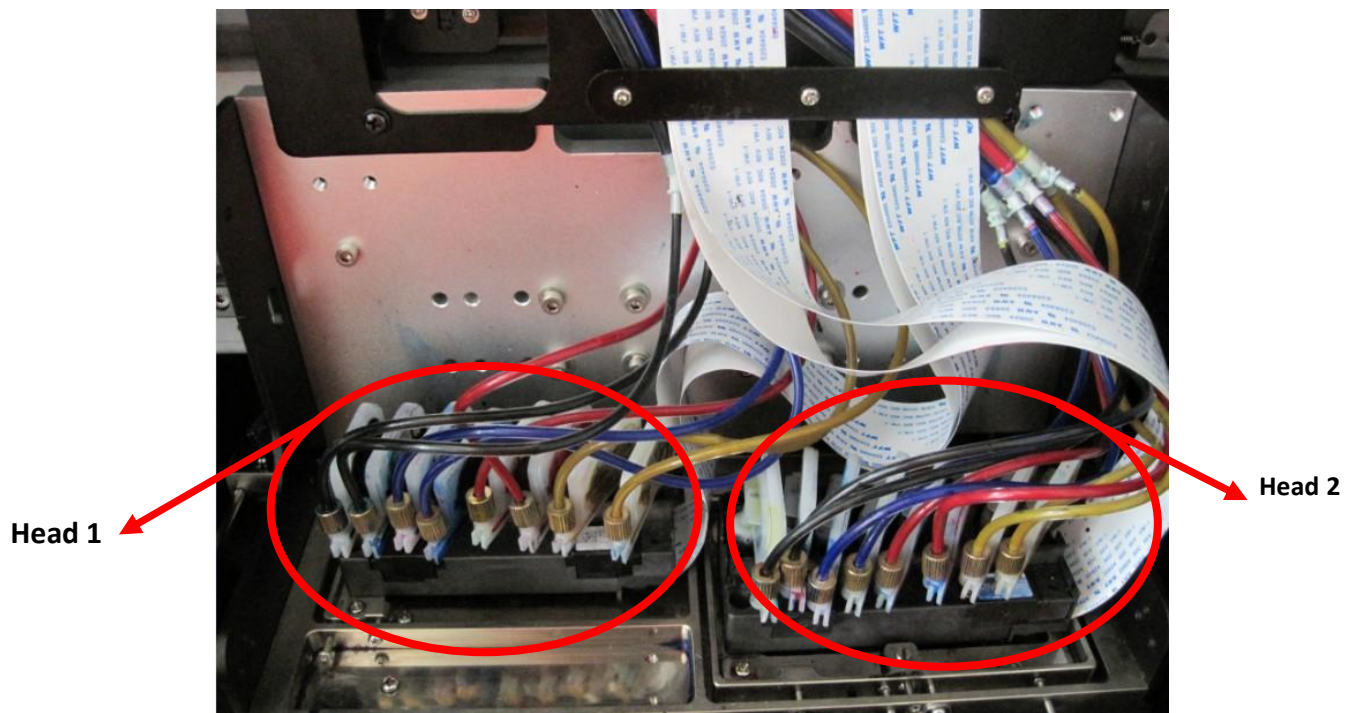
1)、The first important thing is to remove a screw beside the carriage. It's used for fixing carriage during transportation. Do not turn on the power if you haven't removed it.



2)、**Fix the printhead(DX5 printhead)—Very Important!!!**

How to distinguish Head 1 and Head 2? (If only one head, no need to care about this point)

Please check the picture below:



First, connect the printhead and the control board:

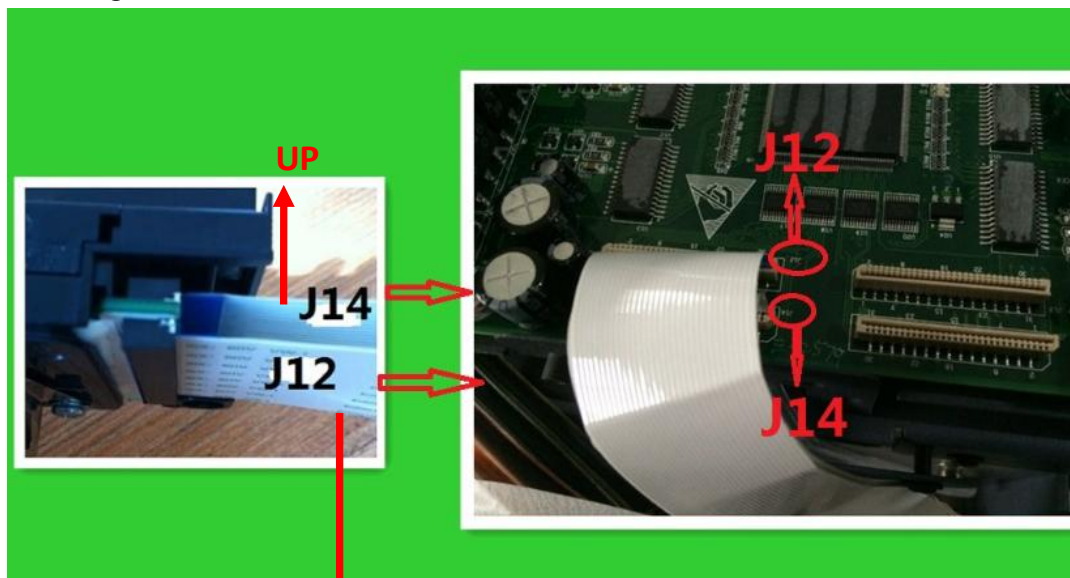
head 1(left head) : the up side connect to **J14**

head 1(left head): the down side connect to **J12**

head 2(right head): up side connect to **J15**

head 2(right head): down side connect to **J13**

Please check the picture below:



Note:

Down

Do not make mistake in this section, or your heads will burn-up.

Usually, we suggest connecting one head only, then turn on the power, if no any abnormal phenomenon, then connect to the other head.

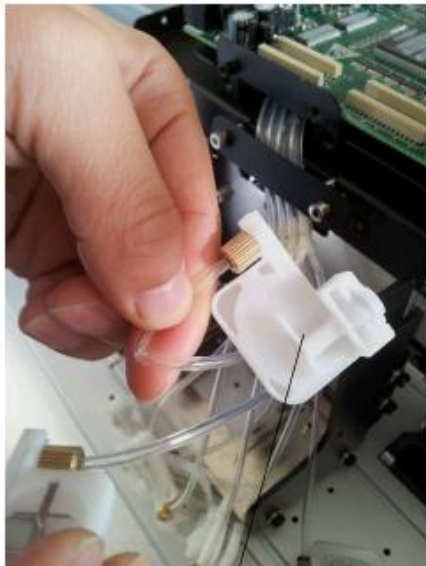
For DX7 printer, please ask the supplier to give the detailed head cable connecting manual!

3)、 Fill the ink



Then fill the ink to the ink damper by injector, check the picture:

1.



Get one group damper, bend one side , use the injector to suck the other damper, as the picture 2.

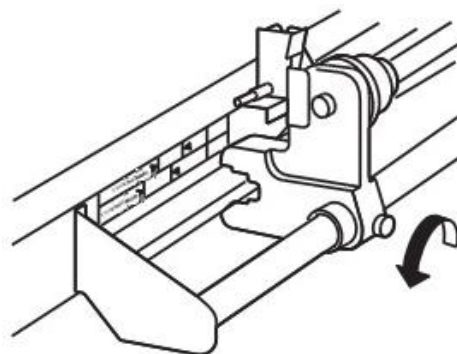
2.



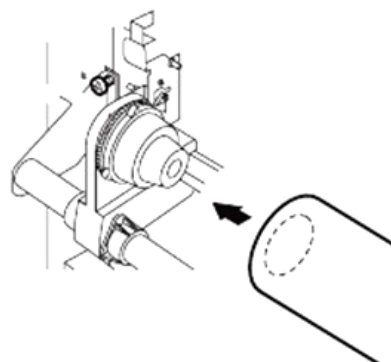
4)、Put the printing media on the device

Please follow the steps below to install the media on the machine:

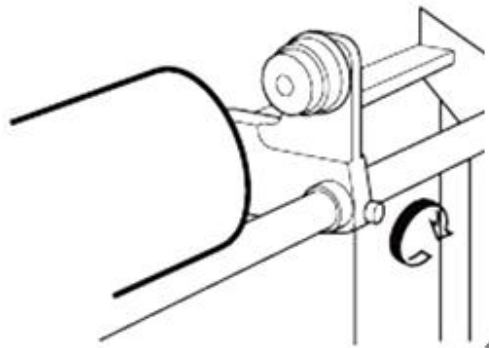
A.



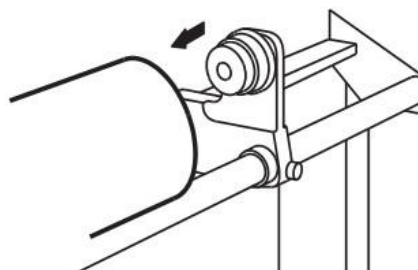
B.



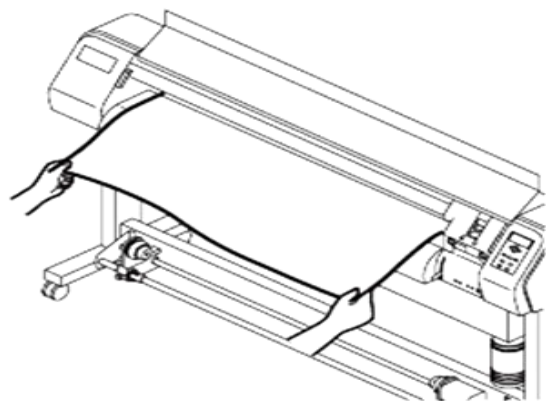
C.



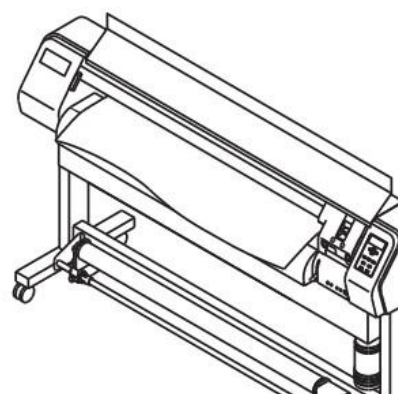
D.



E.



F.



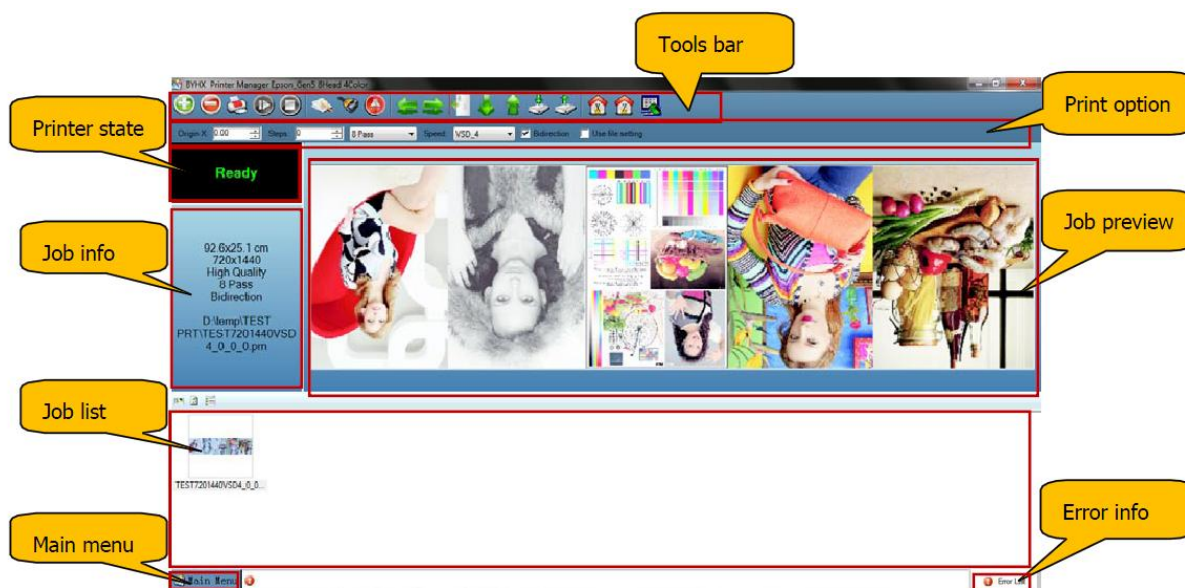
Section 2: Software Installation

1)、PM software

For the way how to install the PM software, please click the hyperlink below to download it:

[“How to install the PM software”](#) (please download from this site, thanks!)

After finishing the PM software installation, please connect the printer to the PC, you will see this picture:



2)、RIP Software Installation.

Here we also provide the download for how to install the RIP software.

[“RIP Software Installation Manual”](#)

If your RIP is Maintop, please download “**Install the maintop software**”, if your RIP is Photoprint, please download “**Install the photoprint software**”

Section 3: Printer Calibration (**Important**)

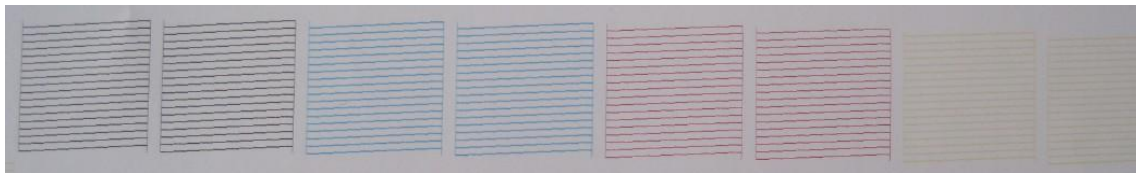
As we know, eco solvent printer is high resolution printer, so we have to do the printhead physical calibrations to guarantee it can printing the high quality pictures.

Before starting the head calibration, we have to enter to the advance mode, please go to the download the detailed ways about [“how to enter to the advance model”](#) (Please click this link and download it)

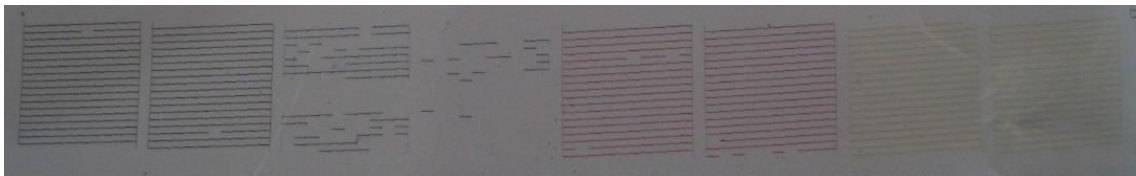
Attn: we need the password to enter to the advance model, our password is “DI”, please input the password by operation panel.

1. Check nozzle

Click “ check nozzle” on the operation panel, then you can check the printhead status, for example:



This proves the head status is good enough!
If you found the testing image is as the below:




Then we have to clean the head(Press “**Cleaning**” button, you can find **weak**, **normal** and **strong** options, we usually suggest to choose “**Normal**”)

2. Setting Print Origin

You can press the “left”, “right” buttons to move the carriage, find the suitable origin, then click “base point” button to fix the print origin.

You can also set the print origin in the PM software:

Click  buttons to move carriage and click  button to setup print origin, and click  button to move media, you can setup any place for print origin.

Section 4: Printhead Calibration (The calibration way of DX5 and DX7 printer are the same!)

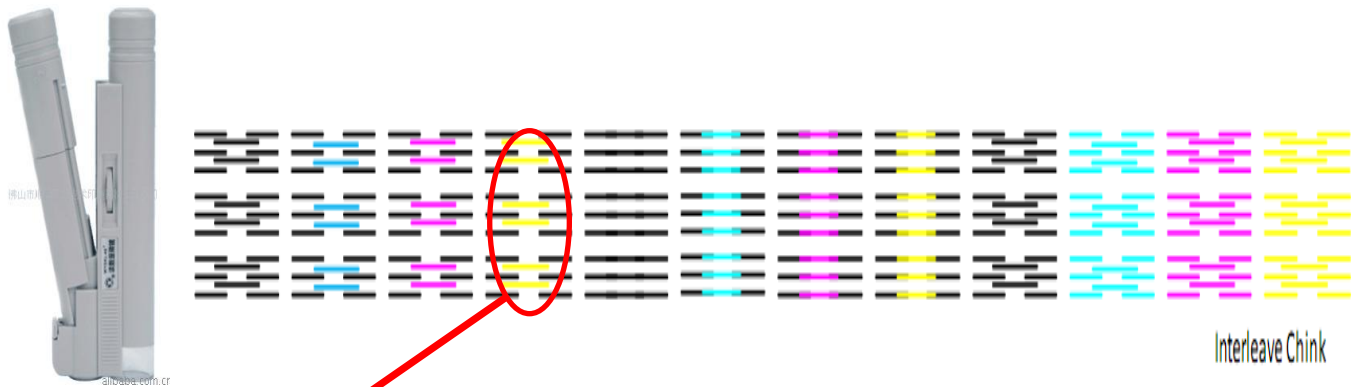
As we said above, please operate as follows to entry the advance mode: MENU—SYSTEM—ADVANCE MODE, then input code: "DI", then we can see a lot of options in adjustment.

1. Interleave check

The Interleave check is to make sure the printhead is smooth in its horizontal direction.

Please click "Interleave check" to print the test image as below:

Now we have to prepare a 40 times microscope to check the testing result.

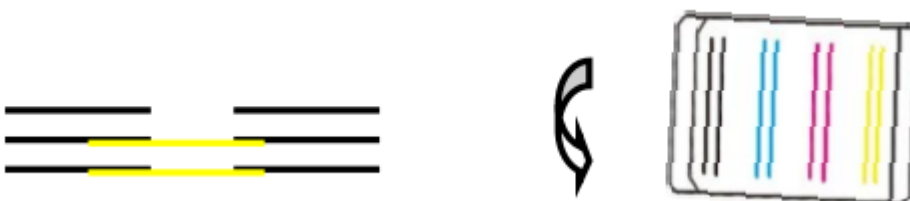


We only need to check the black and yellow group to see the testing quality(Because we suppose the black as the basic color, and the yellow color is farthest from black, if black and yellow can align well, then other colors of course align well too. For example, if we see the following test image:



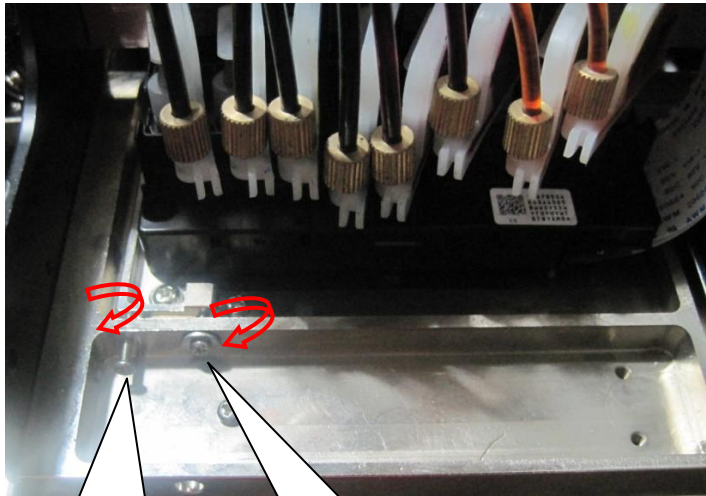
As we can see, the 2 yellow lines just stand at the middle of the 3 black lines, which proved to be perfect.

However, if we find this testing image:



Now the yellow line stand at the lower position, this proved the printhead's left side is higher, while the right side is lower. Then we have to push the head. As the picture below:

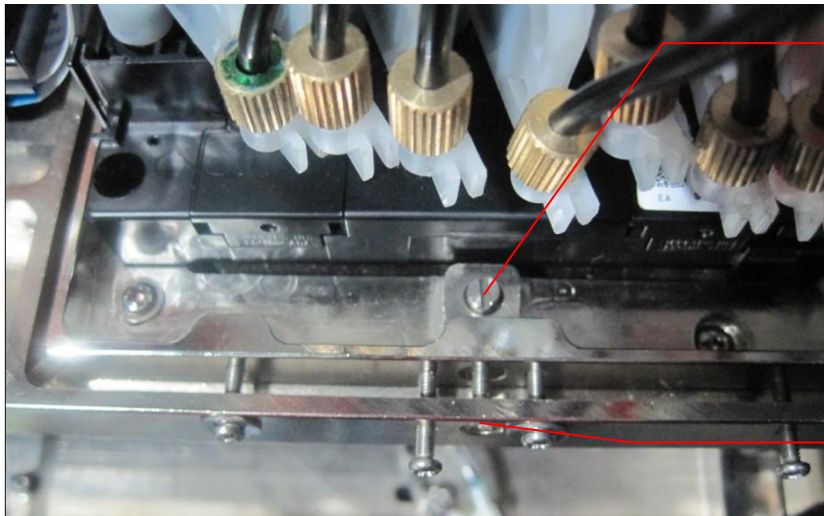
Head 1



Suppose:

we observed Yellow is higher in the microscope. We know, actually it's lower, we should push the screw , untill it's OK. After that, we have to fix head 1. Do not change it.

Head2



Suppose: we observed Yellow is lower in the microscope . We know, actually it's higher, we should turn the screw in clockwise direction. otherwise in counter- clockwise direction.

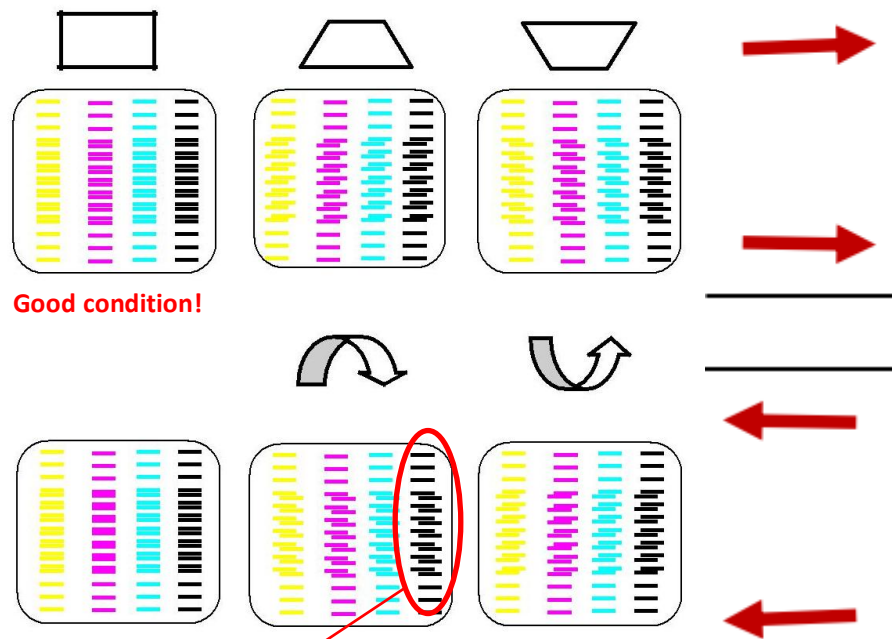
Screw up it when interleave checking is OK

2. Head slant check(usually no need to adjust, you'd better not to move the screw)

This step is to check whether the printhead's front and back side is horizontal enough. Usually there is no need to adjust this step if the interleave check is well done.

But when we need to adjust it, please follow the following steps:

Click the Head slant check to print the testing image:



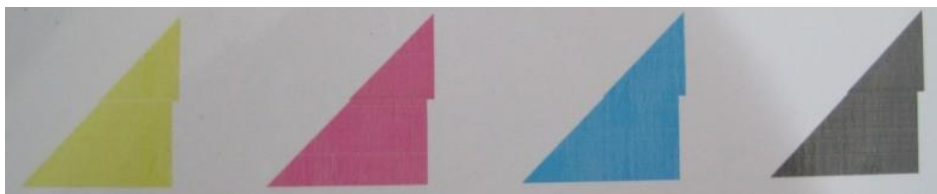
We usually check the **smaller line**, For example:

Let's check the black line for example, we see that the second black line was threw to the left side of the first black line, which proved the head's front side is higher, while the head's back side is lower. If so, we have to adjust the screws on the printhead plate. To make the front and back side stand at the same line!

3. Head Vertical Interval Check (**If your printer is 1 head printer, please ignore this step**)

As we know , our 2 printheads are staggered, that means the 2 heads might be separated or overlapped.
Usually we don't move Head 1, because we have done "interleave check", so all we need to do is to adjust head 2. Now let's print the test image, choose "**Head vertical interval check**", press "**enter**".
 Please check the picture below: triangle is head 1, and trapezoid is head 2.

Print sample:

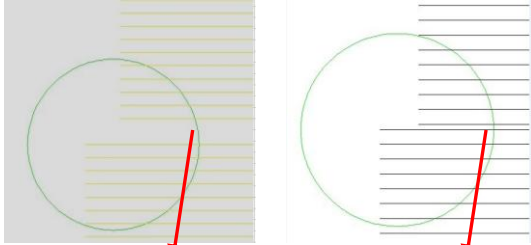


When check it through microscope, the situation is as below:

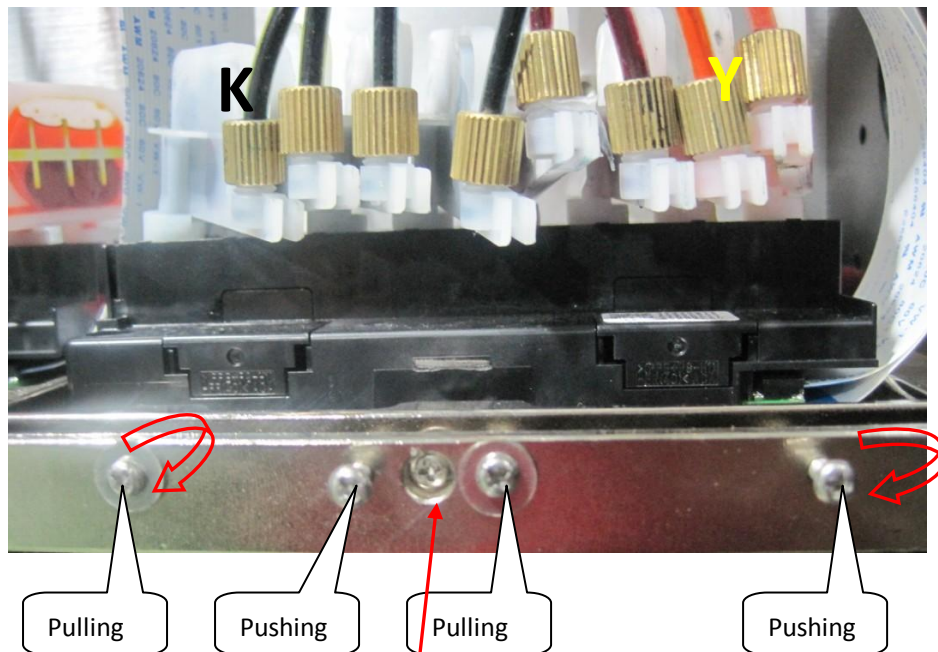
For example: if we print a sample as follows:



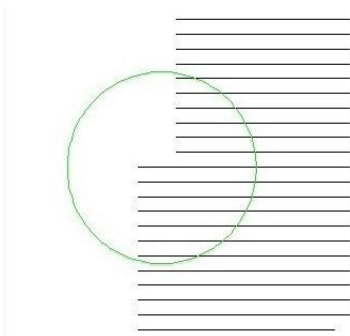
Observe it in microscope ,we can see:



You can see Y is **separated** , and K is **overlapped** . we must adjust the gap like the picture below:
So we should **push Yellow** and **pull Black**



Our goal is make the interval between head 1 and head 2 is even, just like it was printed by 1 head. Like the picture below:



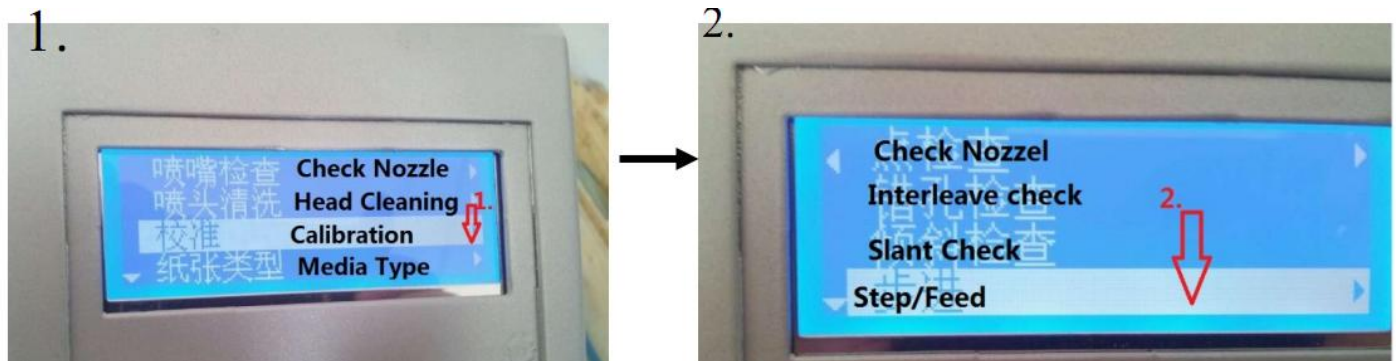
When we adjusted it well , we must screw up head 2(please turn the screw as the arrow shows, turn it in clockwise direction)

4. Feed Alignment

ATTN: Before adjusting the feed/step, we have to set the **media type** first, before the step value is variable for different media!!

How to choose the media type? Please check the steps below:

Click “Calibration”, then get “Step/feed”

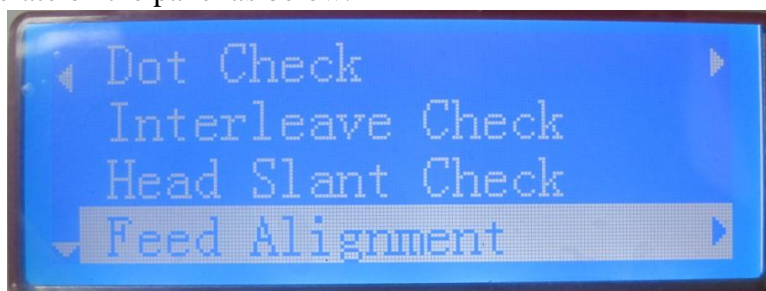


Then you will see High Glossy Photopaper, Self adhesive vinyl, PP, and other material name. for example, if your media is high glossy photopaper, then choose it.

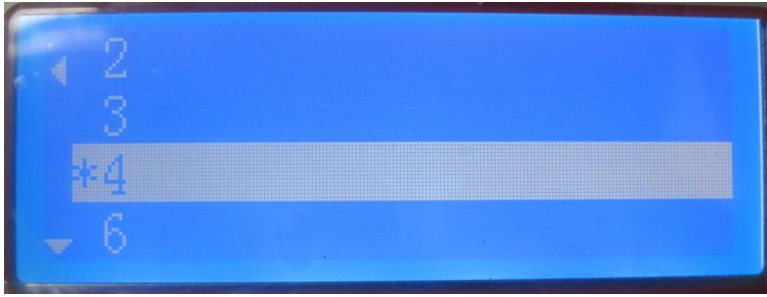


After this step, we can start to print the feed alignment.

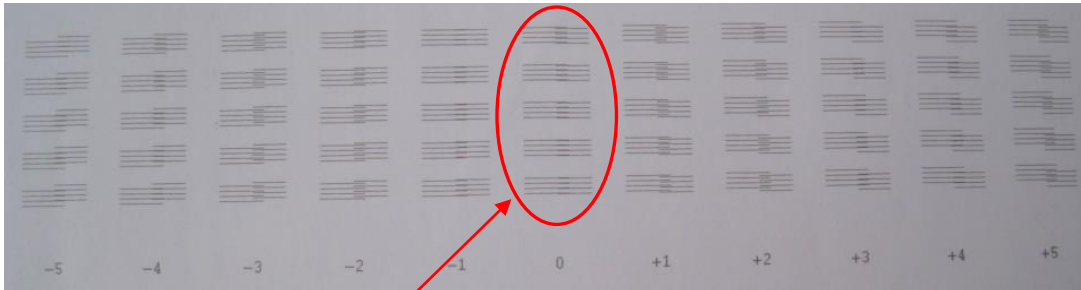
Please operate on the panel as below:



Then choose 4pass (We choose 4 pass as the basic pass, if we finish 4 pass, then the other pass step value will be adjusted automatically).



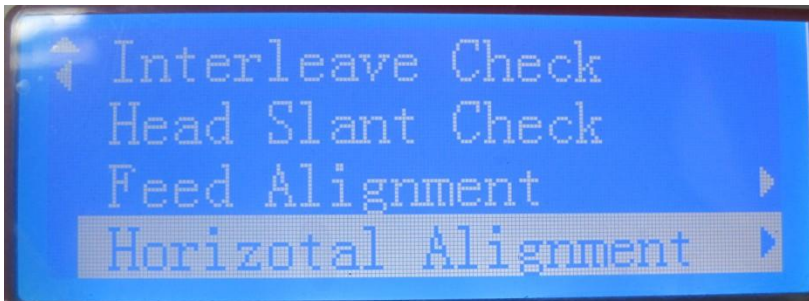
Print:



Our destination is to make lines at **0** in one line. For example, in this picture, obviously , **-1** is better than **0** , so we should minus a little, like 0.05 more or less. then print again, until it's OK.

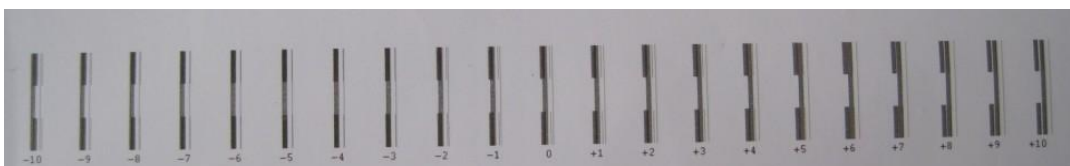
5. Horizontal Alignment

The last calibration is the Horizontal Alignment, in this step, we need to adjust Bi-direction, left and right alignment. Please check the picture below:

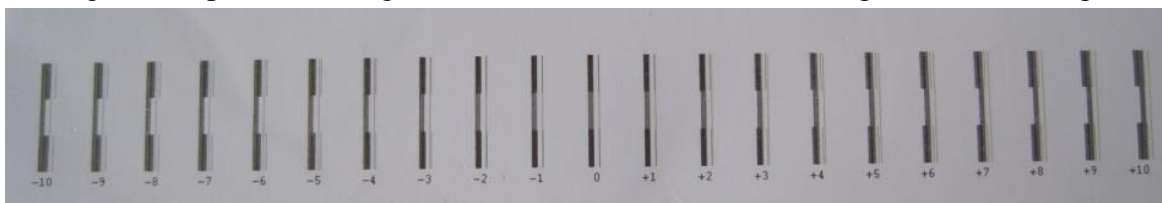


ATTN: Here we must adjust Bi-Director first , choose “VSD 3” .

Below is the Bi-direction printing image, let's check:



All we need to do is to make lines at “0” in one line , now we can see “0” is bad , we must find the best like “-4”, so we change the step value. If origin value was “-3”, then we can change it to “-7”.then print:



This result is what we want.

Usually if the Bi-direction alignment is well, no need to adjust left and right alignment.

Here all the calibrations were finished, we can start to print!!

Section 5. Something Need to Remind.

1. Suggested printing model:

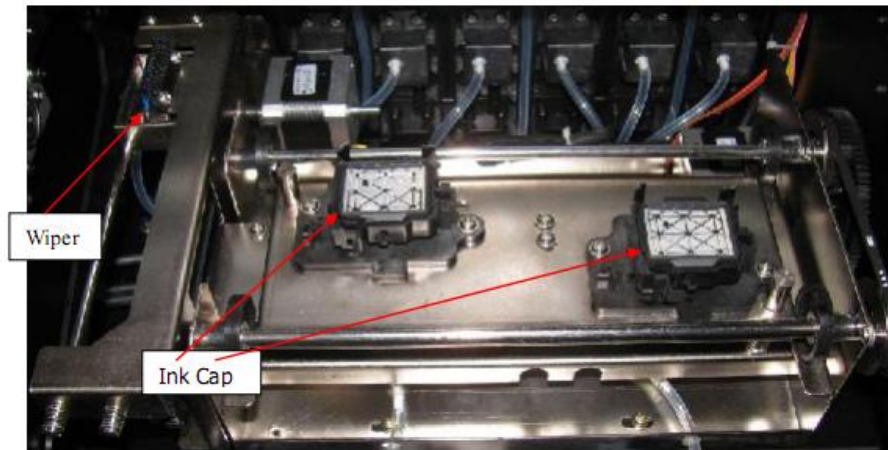
Below is our suggested printing model for user reference.



分辨率	Highspeed	HighQuality	VSD1	VSD2	VSD3	VSD4
	Pass					
360x720	×	2,4	✓	✓	×	×
360x1080	×	3,6	✓	✓	✓	×
540x360	2,4,8	1,2,4,8	✓	✓	×	×
540x720	2,4,8	4,6,8	×	×	✓	×
540x1080	6	3,6	×	×	✓	✓
720x360	2,4	1,2,3,4	✓	✓	×	×
720x720	4,8	2,4,6,8	×	✓	✓	×
720x1080	6,	3,6,	×	×	✓	✓
720x1440	8	4,8	×	×	✓	✓
1440x1440	8	4,8	×	×	✓	✓

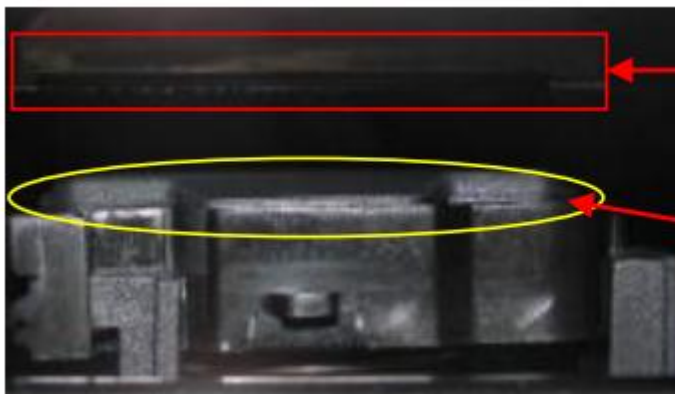
2. Cleaning Tool Manual

Please check the details with pictures below:

Cleaning Tool User Manual



When calibrating the cleaning parameters through the cleaning tool, first we have to connect the computer to the printer, then install a patch file --  patch.exe , after that, we can could install the cleaning tool software-- “  EGen5Debugger.exe .



Before setting the cleaning parameters, we have to adjust well the position of the ink station, which means we have to guarantee the **ink cap** must cover the **printhead** well.

CleanParameter1 CleanParameter2 motion tool

AutoCleanWay: Strong Read Set

action part

HeadMask

☒ Head 1 ☒ Head 2

suck part

SuckTimes 1 Carriage_X_SuckPos 0 HeadBox_Z_SuckPos 3600

SuckInkTime 30 InputAirTime 50 SuckWasteInkTime 10

wipe part

WipeTimes 1 HeadBox_Z_WipePos 0 Carriage_X_Wipe_Speed 7

WiperPos_Y 1850 2550 3640 4340

Carriage_X_WipePos_Start 2000 4000 7000 10000

Carriage_X_WipePos_End 4700 8000 12840 15840

flash part

FlashFreqInterval 1000 FlashCycle 40

FlashTime 120 FlashIdleInCycle 10

Do not change!!

Select “Read” button, which can read the all the parameters from printer.

Detailed Introduction for each part.

1. AutoCleanWay: Strong

There are several selections for cleaning way, including “Strong” 、 “Normal”、 “Weak” and “Refill” ,when you choose different cleaning ways, you can adjust the corresponding parameters, for example, we choose “normal” deaning, then we can adjust the suck ink time, input air time,etc.. after finishing that, remember to click “SET” , **restart the machine**, the calibrated parameters will be saved in the printer automatically.

ATTN: When we come to the advance model, if we choose “cleaning parameters reset” , then all the parameters we calibrated will be returned to the **Original Factory Setting** parameters.

3. Suck Part:

SuckTimes	1	Carriage_X_SuckPos	0	HeadBox_Z_SuckPos	3500
SuckInkTime	30	InputAirTime	50	SuckWasteInkTime	10

Suck times: The default value is 1, **do not change it.**

Carriage_X_SuckPos: This is the position when the carriage start to suck ink, the default value is 1, **do not change it.**

HeadBox_z_SuckPos: When ink cap cover the printhead, the ink cap height value usually is 3500(the higher value means the ink cap is higher)

SuckInk Time: The usually value is 30(unit:0.1 second)

InputAirtime: The waiting time after sucking ink, the value usually is 50(unit:0.1 second)

SuckWasteInkTime) : Suck **waste ink** time is usually 20(Unit: 0.1 second)—the suck waste ink time is determined by the suck ink time, the longer the time to suck ink, the longer the time to suck the **waste ink**.

4. WipePart: Here allow us to set 4 heads totally. Each printhead has one list parameters. For example, as the picture shows below.

WipeTimes	1	HeadBox_Z_WipePos	0	Carriage_X_Wipe_Speed	7
WiperPos_Y	1850	2550	3640	4340	
Carriage_X_WipePos_Start	2000	4000	7000	10000	
Carriage_X_WipePos_End	4700	8000	12840	15840	

Head 1

WipeTimes: the wipe time's value is 1, **please do not change it!**

HeadBox_Z_WipePo: the wiper's position, usually the value is 0.

Carriage_X_Wipe_Speed: This means the carriage's speed when wiping the printhead, the value is 7.
Please do not change it.

WiperPos_Y: This means the position when the wiper move to wipe the printhead, the value for head 1 is 1850, the value for head 2 is 2550.

Carriage_X_WipePos_Start: The carriage starting position while wiping the printhead. The value is 2000, **please do not change it!**

Carriage_X_WipePos_End: The carriage position when finish the wiping, the value is 8000, **please do not change it!**