

# MEIJET 32/25/18-X Solvent Printer

## Operation Guide

Rev. 3.1, January 15, 2008



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## List of Warnings:

- **When using the forklift, make sure the forklift not touch the front and back media sensors installed at the middle of the two bottom steal beam. Contact by the forklift could damage the sensors.**
- **The printer must be set in a clean location free from dust. A dusty environment could shorten the life of the print heads and the printer.**
- **During installation of PCI card, tighten the PCI card onto the computer slot so that PCI card will not be loose during printing. A loose PCI card could adversely affect the printing and may damage the PCI card.**
- **Keep the extra length of fiber optical line inside the right cabinet. Do not fold or step on the fiber optic line as it may damage the line.**
- **Do not disconnect the decoder cable during printing. Disconnect this cable only when computer is powered off.**
- **Do not forcefully push the print head converting board as it may damage the connection if the connection is aligned the wrong way.**
- **Do not unplug or plug the software dongle with computer on. Doing so may damage the software RIP dongle and it will not be covered by warranty.**
- **Make sure to use the same resolution for the RIP and ePrint. A different resolution could change the size of the image printed. A 360 dpi RIPed file, when printed with ePrint at 180 dpi, would double the image width. The carriage would likely hit the right hand side stopper. Repeated collision of the carriage with the stopper, especially at fast printing speed, could damage the printer.**
- **Always keep print heads from drying off. When print heads are in protection plate, always make sure that there is enough cleaning solution inside the plate. When print heads are full of inks and are not in protection plate, make sure flash printing is on with print head voltage on, flash jetting selected in software and software/computer not turn off.**

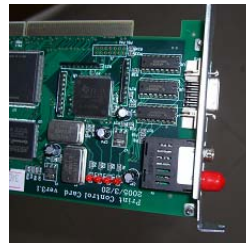
# Chapter I: Quick Installation Guide

## 1.1 Set Printer Ready

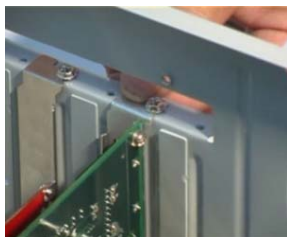
- Remove all the screws on the crate to open up the crate.
- The printer is tightened to the bottom board of the crate. Remove all the screws that tighten the printer to the bottom board to free up the printer.
- The bottom two steel beams on the printer can be used for forklift to move the printer. Use a forklift to move the printer to an appropriate location. A right location for the printer should be free from dust, relatively temperature stable, and very importantly, well ventilated.
- **Warning: When using the forklift, make sure the forklift not touch the front and back media sensors installed at the middle of the two bottom steel beam. Contact by the forklift could damage the sensors.**
- **Warning: The printer must be set in a clean location free from dust. A dusty environment could shorten the life of the print heads and the printer.**
- Set up grounding by connecting the steel casing of the printer with a water pipe or a steel bar buried inside ground at least 1 meter deep. Proper grounding eliminates static. It also improves the life of electronic boards and image quality.

## 1.2 Install PCI Card

- Copy ePrint folder onto the C drive of the operating computer (the computer needs to have minimum 1 GB ram memory).
- Open the spare part box and remove the PCI card. To prevent damaging to the sensitive electronic boards included, avoid touching the chips on the cards directly with your hands. Handle the boards by the edge. Tighten the PCI card to the computer fitting bracket.



- Disconnect the power cable to the computer. Open up the casing for the computer hard drive. Insert the fitted PCI card into its corresponding position on the back of the computer. Tighten up the fitting bracket onto computer casing so that PCI card is firmly in place. Close the computer cover, and re-connect the computer power cable.

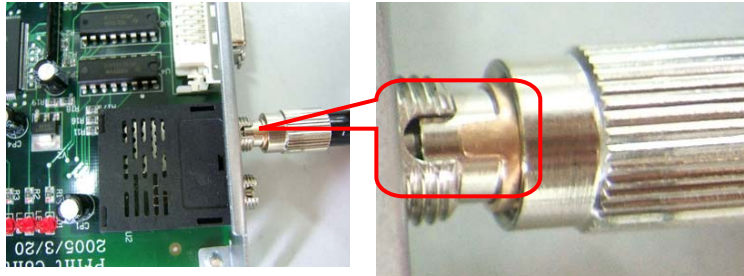


- **Warning: During installation of PCI card, tighten the PCI card onto the computer slot so that PCI card will not be loose during printing. A loose PCI card could adversely affect the printing and may**

**damage the PCI card.**

### 1.3 Connect Fiber Optic Line

- Place the socket of the fiber optic line into the slot on the PCI card.



- Note: When print head board is connected via fiber optics line through Rx connector, PCI card must be connected via fiber optics line through the Tx connector, or vice versa.
- **Warning: Keep the extra length of fiber optical line inside the right cabinet. Do not fold or step on the fiber optic line as it may damage the line.**

### 1.4 Connect Decoder Cable

- Insert the decoder into the PCI card slot and connect the other end to the printer.
- **Warning: Do not disconnect the decoder cable during printing. Disconnect this cable only when computer is powered off.**

### 1.5 Install Print Head Cleaning Vacuum

- Insert the conduit of the vacuum into the vacuum connect.
- Insert the vacuum's power plug into the socket inside.
- Switch on the vacuum.

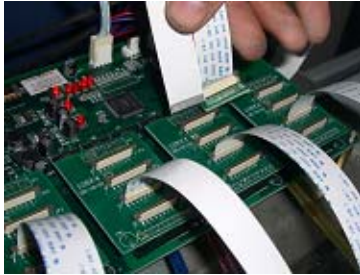
### 1.6 Install Print Head

- Carefully take out the print heads from its boxes. Handle print head by edge. Do not touch the nozzle plate.
- Use 4 screws to place each print head onto a printer head holder plate.

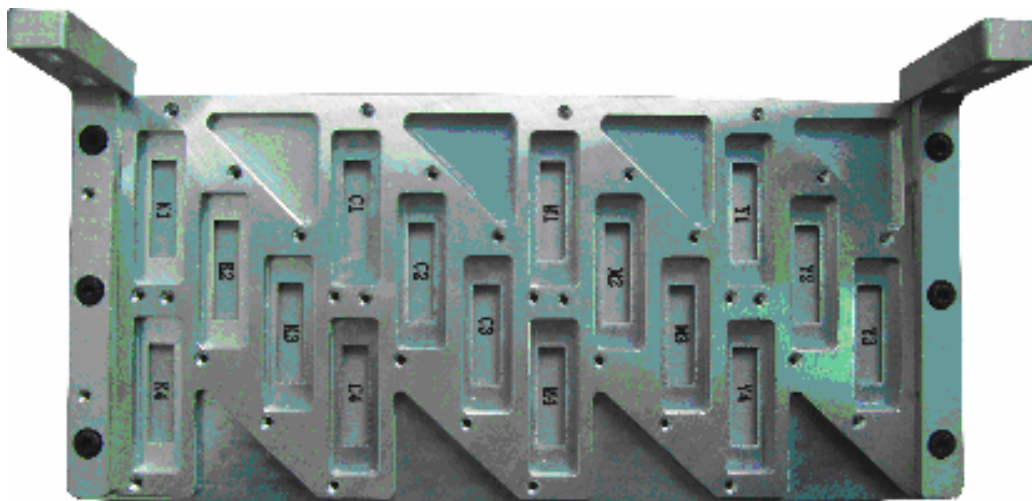


- Install the small print head converting board onto each print head. Note, the two edges of the print head connecting to converting board are slightly different, with one edge straight and the other edge skewed. Gently push the converting board onto the print head first. If it doesn't fit, turn the converting board around, push the board in.
- **Warning: Do not forcefully push the converting board as it may damage the connection if the connection is aligned the wrong way.**

- Connect one end of the print head data cable to each print head converting board. The exposed connection of the data cable needs to face outward as shown in figure below.



- Use 2 screws to fix the printer head holder plate onto the head plate. Do not over tighten the screw. Make sure all print heads are in vertical position (and parallel to each other). There is a small tolerance built on the head plate for fine adjustment of print head position. Make sure print heads are correctly distributed on print head plate. For 16 heads, 4 color configuration, please see figure below for print head installation position. If it is for 6 colors, 12 heads configuration, Lc1 and Lc2 would replace C3 and C4, and Lm1 and Lm2 would replace M3 and M4 on print head plate.



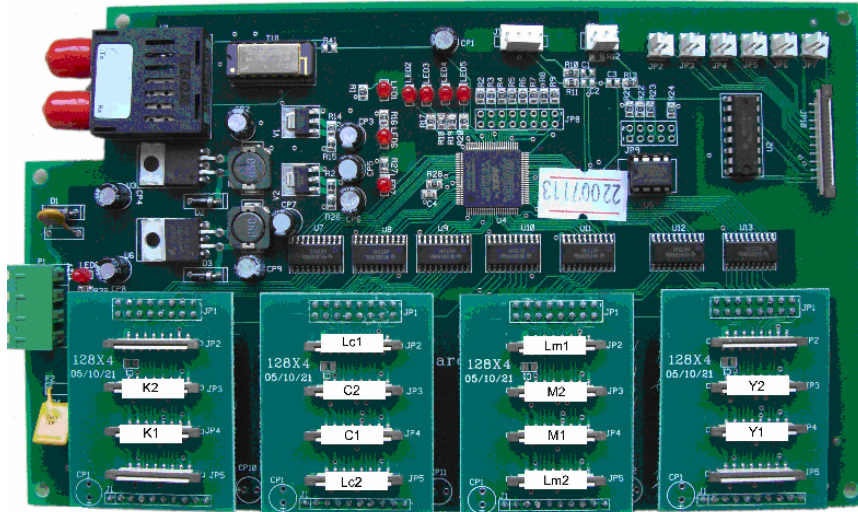
- Connect ink tubing to the print heads. The order for ink color out of ink tubing from left to right is black, cyan, magenta, yellow, light cyan, and light magenta.
- Connect the other end of each print head data cable to the print head board. Make sure data cable is plugged into the right spots for each print head accordingly. For 6 colors, 12 heads configuration, see image on next page for the print head cable arrangement connecting to print head board.

### 1.7 Install PCI Drive Software

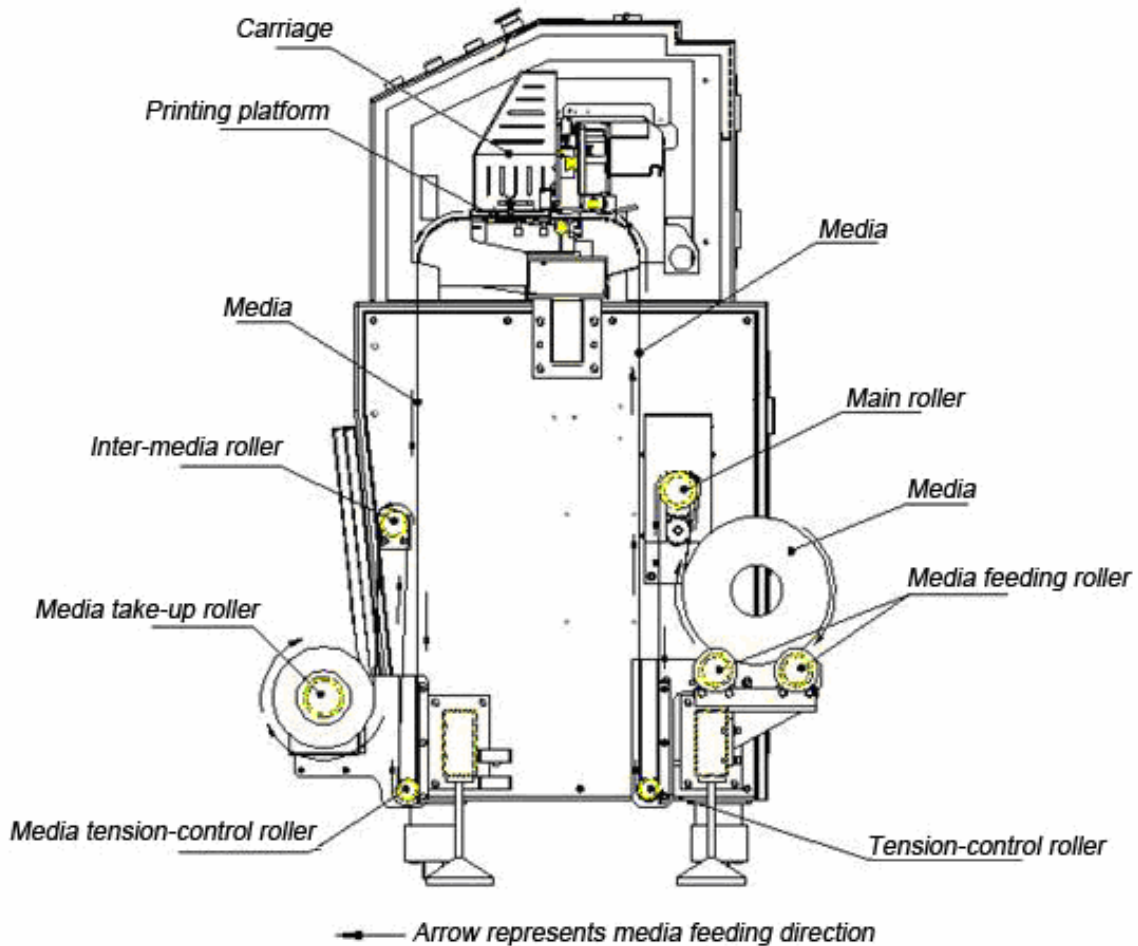
- Turn on the computer.
- After Windows start up, the computer will find the PCI card. “New hardware found” would show up on computer screen. Install the PCI card driver from the instruction on the computer screen. PCI card driver is located insider the Printer Driver folder and the file name is PCICardDriver.exe.

### 1.8 Install Printing Software, ePrint

- Run ePrint.exe, which is the printing operation software. A dialog will pop up on the screen. Select the right printer model/configuration and print resolution needed to start. For this printer series, six configurations can be made with 4, 6, 8, 12 (4 colors), 12 (6 colors), 16 print head combination. Two (X direction) resolutions are offered at 360 and 180 dpi.



### 1.9 Load Media Roll



Lift up the lever, load the material according to the media track shown in the picture above onto the platform. Make sure media is aligned and smooth on platform. Tape the front edge of the media to the media roll up reel. Tighten the media on the media path by rotating the media roll to make sure no wrinkles on the media. Release the level.

### 1.10 Power-on Printer

- Quit all programs and turn off the computer.
- Plug the printer power cord into a 220v, 10 Amp power source.
- Switch on the main power of the printer next to the power cord plug.
- Check both emergency switches. Pull them up if they are pressed down.
- Turn on the air break switch inside the right cabinet as shown in picture below, if they are set at “off” position.
- Press down print head voltage button. Check print head voltage using a multi-meter as shown below. Print head voltage should be in the range of 28-33 volts. This step is to safeguard expensive print heads. If print head voltage is not within the range, check the power inlet voltage and the voltage from all power converter according to Chapter IV.



- Turn off the main power

### 1.11 Flush Print Heads

- Open a cleaning solution bottle, and place the bottle inside the back of the right cabinet near the ink pump. Remove the bottle seal. Insert all ink tubing into the cleaning solution bottle.
- On the print head side, put all ink tube into a clean waste ink bottle.
- With the “Print Head Voltage” button remain switched off (no light on the button), push “Purge Ink” button to bring cleaning solution to the waste ink bottle. Watch for cleaning solution flushing the whole ink line. Make sure that all notable particles or dried inks inside the ink line are flushed out.
- After ink line is flushed clean, take ink tubes out of the waste ink bottle and put waste ink bottle away. Connect ink tubes accordingly to the print heads.
- Push “Purge Ink” button to bring cleaning into print heads. Watch for the cleaning solution being jetted out of the print head. Release the “Purge Ink” button.
- Wait for about 10-15 minutes, push “Purge Ink” button again for about 5 seconds.
- Repeat last step twice to remove completely the wetting oil inside a new print head. Wetting oil could react with solvent inks and causing nozzle clogging.

### 1.12 Install Inks

- Remove all the ink tubing from the clean solution bottle, and place the tubing onto a clean surface.
- Push “Purge Ink” button to remove the cleaning solution in the line and inside ink sub-tanks.
- Turn on the computer. Start the printing software. Click to reset the printer. This will make the carriage



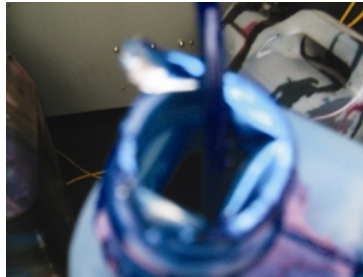
back to its original position. The print heads will start to jet ink periodically if the “Print Head Voltage” button is turned on later.

- Open ink bottles and place the ink bottle next to the clean solution bottle. Cut a small opening on the bottle seal. Insert ink tubing through the cut into the respective ink bottle.

Right Way



Wrong way



- Push “Purge Ink” button to bring ink into print heads. Watch for air inside the ink inlet line from the ink sub-tank to print head. Press the button again to remove the air if present.

### 1.13 Test Print

- Push the “Print Head Voltage” button. One can check for the ink jetting by placing a piece of paper under the head plate for a second, then pull it out.
- From the software click “Cleaning” button to vacuum clean print heads.
- Click the “Test” button on the menu, it will run “Nozzle Check” test automatically.
- From now on, we are ready to go to next chapter for print head and printer calibration.

### 1.14 Printer and Print Head Calibration

- Refer to 2.2.6 c) “Check, Set” section in Chapter II to calibrate X and Y movement
- Refer to 2.3.2 in Chapter II to calibrate print heads under both 360 and 180 dpi resolution
- Refer to 2.3.2 to calibrate bi-direction difference
- Refer to 2.3.2 to adjust step offset (or media advance). One also needs to print a small image to confirm the step offset adjustment. If printed image has dark line banding, this means that there is not enough media advance and two passes are overlapping each other. One needs to add a positive number to the value in step offset box. If printed image has white line banding (and no nozzles were missing), this means that media advance is too much. One needs to reduce media advance by adding a negative number to the value in step offset box. This finer adjustment of step offset can be left done in 1.16.

### 1.15 Rip an Image File

- Install the RIP software comes with the printer. Put the CD in the drive and install the Rip program by following the instruction on the screen.
- **Warning: Do not unplug or plug the software dongle with computer on. Doing so may damage the software RIP dongle and it will not be covered by warranty.**
- Under “File” select “Printer Setup”. Select the correct printer model, and click on the “Property” box. Under “Property”, set the correct resolution and color mode. Under “Port”, select “FILE”. Click “OK” and “Exit” to exit from the dialog box.
- Under “File” select “Canvas Setup”. Set the width accordingly or to the maximum at 3.3 m.
- Under “Edit”, select “Add Image” to locate and open the image file to be RIPed. The acceptable file format by current RIP includes bmp, jpeg, and tiff file format.
- Adjust the image file accordingly if needed.

- Click on the “Print” button. A dialog box will show up. Select the right resolution, media, and ICC profile to be used. Click “Print” button in the dialog box to proceed. Please refer to the instruction manual and demo video on the CD of RIP software on how to create a custom color ICC profile.
- The RIP software will start to RIP the file and output file will be saved in “program file/ultraprint/output folder”

### 1.16 Print an Image

- Go to ePrint program, open the Ripped file from the above folder or by clicking the “Refresh” button (if a file from the same location was opened previously).
- **Warning: Make sure to use the same resolution for the RIP and ePrint. A different resolution could change the size of the image printed. A 360 dpi Ripped file, when printed with ePrint at 180 dpi, would double the image width. The carriage would likely hit the right hand side stopper. Repeated collision of the carriage with the stopper, especially at fast printing speed, could damage the printer.**
- Make sure print heads are in good working condition by clicking “Test” button for “Nozzles Checking”. If some nozzles are blocked, clear the blockage by pushing down “Ink Flushing” button on the printer, Ink will start to flow out of print head nozzles. Clear off excessive ink by gently wiping the ink off with a piece of non-woven cloth or the sponge tip as supplied by Meijet.
- Select the number of passes, speed, and the margin (where the print start at X direction). Click on “Print” button, and a dialog menu for ink limit will show up. Typically the ink limit is set at 100% when the right ICC profile is used. If other ICC profile (profile made for other media or at other passes) is used that could lead to ink over saturation, adjust the ink limit accordingly to eliminate ink saturation.
- For Xaar printer with Meijet high density ink, we recommend printing at 4 or 6 passes under 180dpi to get the better combination of printing spend and image quality.
- Click on “Print”. The image will start to be printed.
- Adjust step offset according to 1.14 during printing if necessary.

### 1.17 End of Day

- Refer to 3.1.3 to protect print head at the end of a day. Turn printer power off before put on the protective plate underneath the print head plate.

### 1.18 Start Another Day

- Move the carriage with the print head protection plate underneath off the printing platform. Take the protection plate off. Place the protection plate inside the left cabinet of the printer, and put a piece of plastic film on top of the plate to keep it away from dust.
- Power on the printer and computer. Open ePrint. Click “Home” button on ePrint to make sure the connection between the computer and printer is established.
- Make sure “Print Head Voltage” is on.
- Before start a printing job, one need to flush out the cleaning solution inside the head first. The cleaning solution inside the heads comes from the solution added to the protection plate to protect the print heads. Purge out the cleaning solution and do a nozzle check to make sure all nozzles are in good condition.
- Rip or print files according to 1.15 and 1.16.

## Chapter Two: Control Software

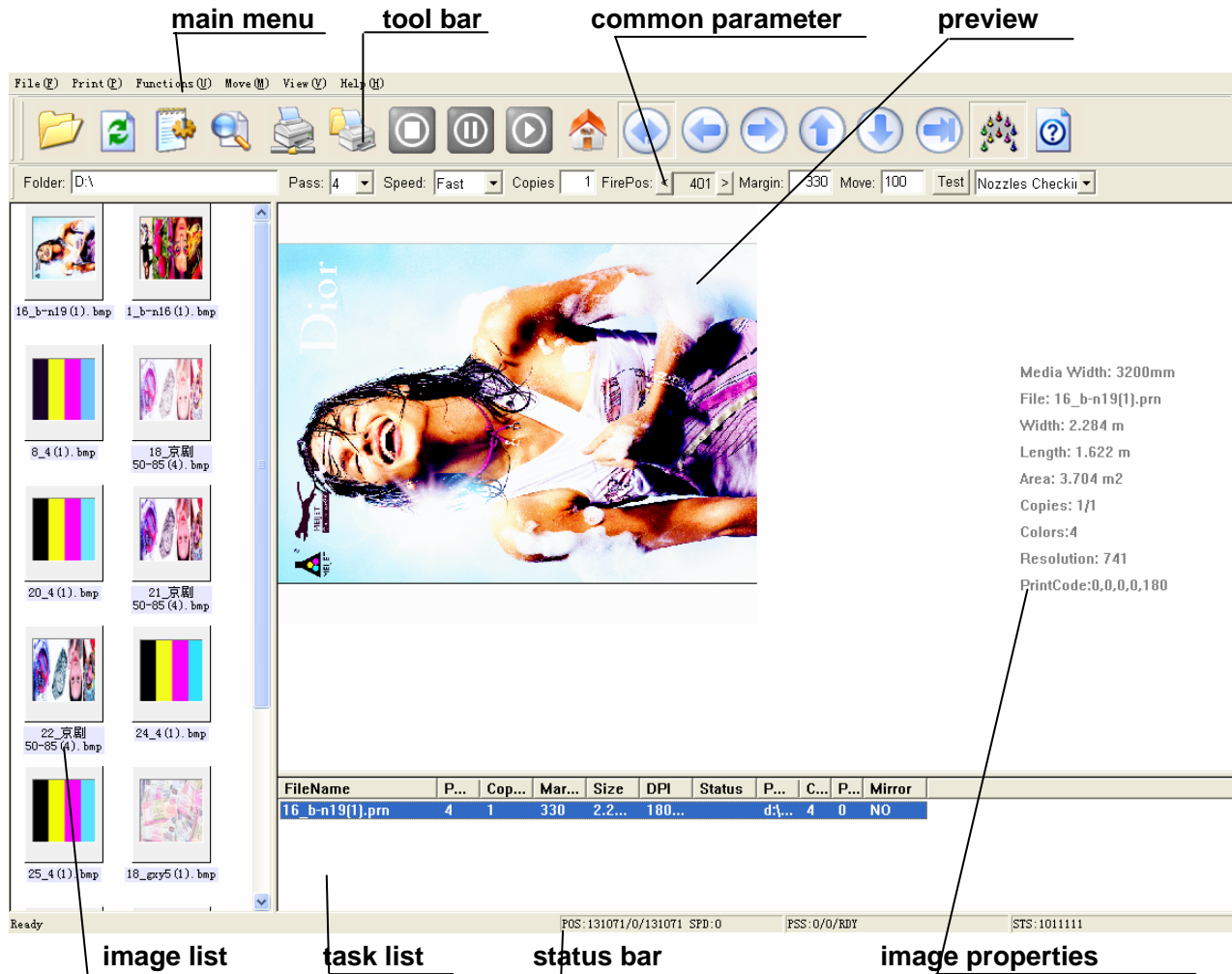
### 2.1 Software Features

- ◆ print head: Xaar 128/360 dpi print head, 4, 6, 8, 12, 16 combinations.
- ◆ resolution: 360 DPI and 180 DPI,
- ◆ color: 4 colors or 6 colors,
- ◆ print mode: 1, 2, 3, 4, 6, 8, 12, 16 passes,
- ◆ output preview: prn file can be converted into bmp file and then be previewed,
- ◆ free to start and stop each individual print head,
- ◆ intelligent printing:
  - ◆ multi-image printing,
  - ◆ auto cleaning: auto cleaning during printing,
  - ◆ flash jetting: prevent clogging when a print head is not printing,
  - ◆ color bar: prevent a print head from clogging, monitors the status of the print head. The distance and the width of the color bar can be adjusted.
  - ◆ capable of adjusting print head data queue, media feeding step, and printing position during printing,
  - ◆ media sensor: check media width, configure the picture's white borders,
  - ◆ uni-directional (direction can be selected) or bi-directional printing capability and mirror printing capability,
  - ◆ edge fading-out: to minimize banding from multiple passes.
- ◆ footnote printable
- ◆ x-motor acceleration setting
- ◆ proof printing

## 2.2 Software Functions

### 2.1.1 Main Menu

Start the software and open the main menu



### 2.2.2 Main Function

Main Function	Secondary Function	Explanation of the Functions
<b>File</b>	Open	selected image will be shown in the image list
	Delete	click the file to be deleted on the list, press "del" key to delete file
	Refresh	refresh image list
	Repreview	
	Property	
	Exit	quit the software and a dialog box will appear to confirm whether print heads are to reset to their original position for protection
<b>Print</b>	Home	initialize PCI card. Carriage goes to its original home position

	Measure	
	Option	enter option dialogue box, adjust printing parameters
	Base Head Alignment	enter head alignment box
	Network Print	not available
	Print	print selected image
	Stop	stop and cancel the printing job
	Pause	pause the printing job, the carriage goes back to home position
	Continue	resume printing job stopped by "pause"
	Clean Head	use vacuum to clean print head
	Flush	turn print head flash printing on or off
	Tension	turn the media tension control on or off (not available)
	Cleaner	turn the vacuum cleaner on or off
<b>Move</b>		
	Left	move carriage to the left direction
	Right	move carriage to the left direction
	Feeding	advance media to
	Backward	advance media backward
<b>View</b>		
	Tool Bar	show/hide tool bar
	Status Bar	show/hide Status bar
	Option Bar	show/hide Option bar
	Refresh	refresh image list
	Preview	(fix;1/2X;1X;2X) : zoom in/zoom out preview
	Parameter of Print Head	not available
	Experiment and adjust	
<b>Help</b>		
	Help	
	About printer	
	Register	

### 2.2.3 Tool Bar

There is a tool bar under the main menu.



- a) open: the same as "open path" in the menu
- b) refresh: the same as "refresh" in the menu
- c) options: the same as "options" in the menu
- d) measure material: if media sensor is mounted, the boarder and the width can be measured
- f) print: the same as "print" in the menu
- g) stop: the same as "stop" in the menu
- h) break: the same as "pause" in the menu

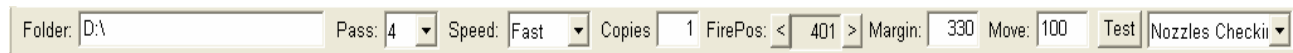
- i) continue: the same as "continue" in the menu
- j) reset: the same as "reset" in the menu
- k) clean: the same as "clean print head " in the menu
- l) left: move print head to the left according to selected parameters
- m) right: move print head to the right according to selected parameters
- n) feed material: feed material according to selected parameters
- o) receive material: receive material according to selected parameters
- p) flash jetting: the same as "flash jetting" in the menu
- q) about: the same as "about..." in the menu

#### 2.2.4 Short-Cut Key

To facilitate and speed up operation, some short-cut keys are set as follows:

- a) Ctrl+Home equal to "reset" key
- b) Ctrl+End equal to "clean" key
- c) Ctrl+ Pause equal to "break" key and "continue" key
- d) Ctrl+ ← equal to "left" key
- e) Ctrl+ → equal to "right" key
- f) Ctrl+ ↑ equal to "feed material"
- g) Ctrl+ ↓ equal to "receive material"

#### 2.2.5 Parameter Bar

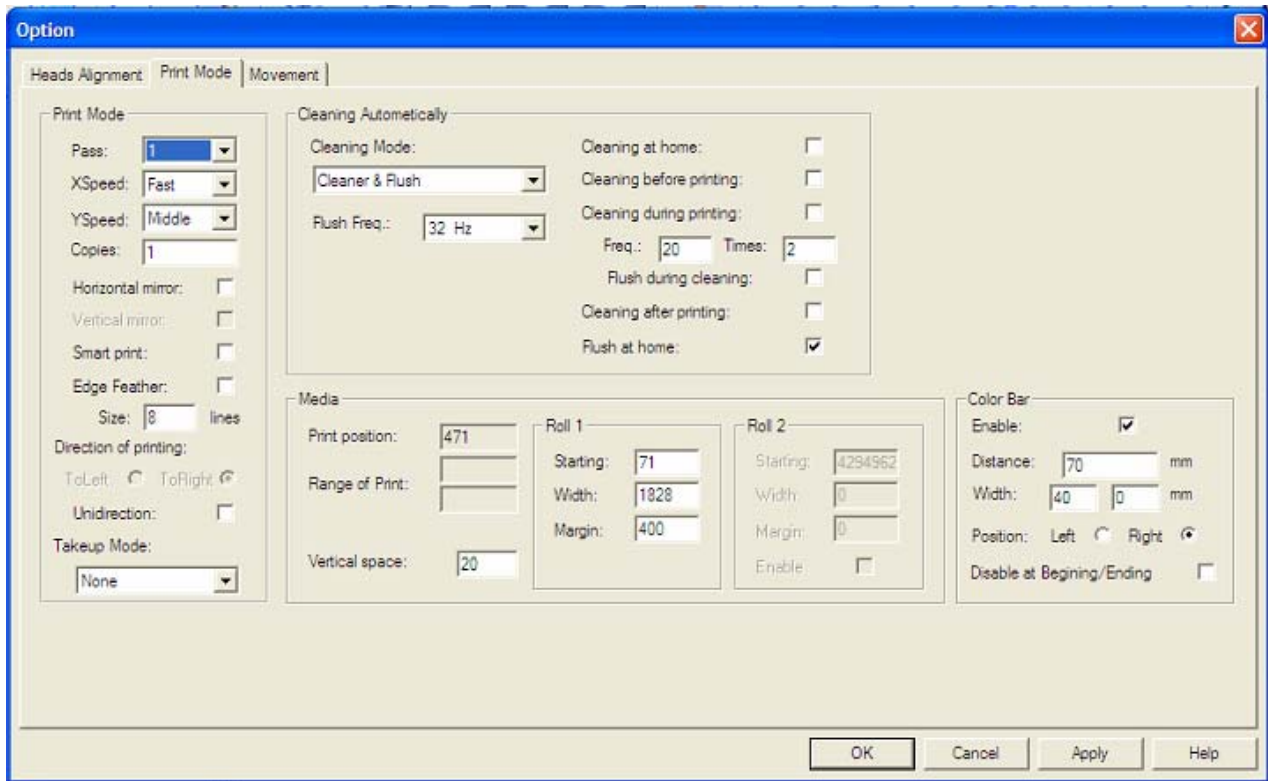


To facilitate operation, there is a parameters bar under the tool bar

- a) folder: save the current printing path
- b) pass: printing mode. There are 1, 2, 3, 4, 6, 8, 12 and 16 pass to choose from
- c) speed: speed of the print head. Three speeds are available: slow, middle, and fast
- d) copies: number of the same images to be printed
- f) firepos: the start printing position of the image. i.e. the distance to the left in mm
- g) margin: distance between image and the media edge in mm
- h) move: the distance carriage or media movement in mm
- h) test: print test to adjust print head settings.

## 2.2.6 Parameter Setting

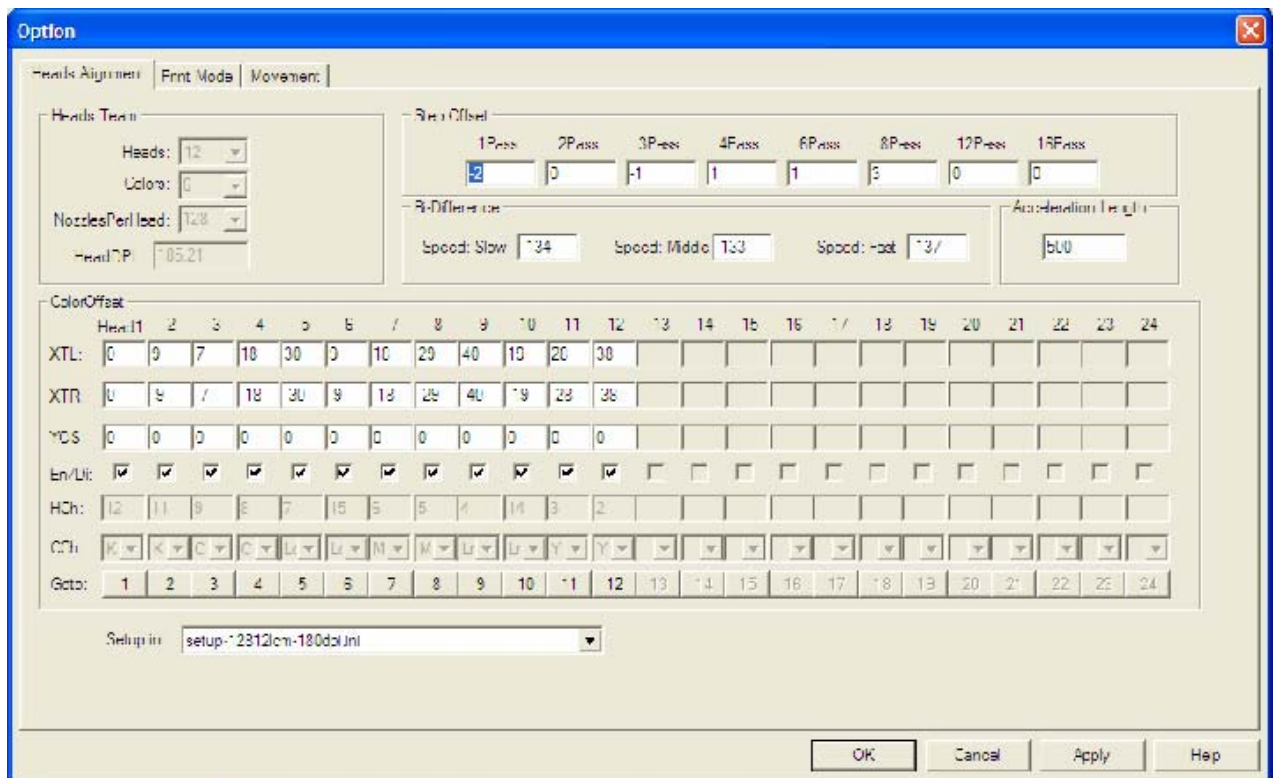
### a) Print Mode



Print Mode		
	Pass	Print mode: there are 1, 2, 3, 4, 6, 8, 12, 16 passes to choose from
	X speed	Carriage speed: three speeds are available: fast, middle, and slow
	Y speed	Media feeding speed during printing. Three speeds are available: fast, middle, and slow
	Copies	Number of image to be printed
	Horizontal Mirror	For printing mirror image on both sides of the material
	Vertical Mirror	Vertical mirror printing of an image
	Smart Print	Skip white
	Edge Feather	To smooth pass line to minimize banding
	Direction of	Print to left or to right
	Uni-direction	Uni-direction or bi-direction printing
Color Bar		Anti clogging; it can be used to check the printing status; it can be set beside the image
	Enable	Open/close the color bar
	Distance	The distance between the color bar and the image ( unit: 1 jet point)
	Width	Two values: separate color bar width and mixed color bar width (unit:1 jet point)

	Position	The color bar is either at the left or at the right of the page (unit: 1 jet point)
Cleaning		auto cleaning action in printing
	Enable	open/close auto cleaning
	frequency	how many movement cycles (moving back and forth) of a print head are allowed before a cleaning is needed
	times	when cleaning is done, how many times the print head completes a movement cycle?
	mode	cleaner: clean with the cleaner
	Flash freq.	Flash jetting frequency ranges from 0-15
Media		
	print position	the start printing position
	Range of Print	horizontal space of each frame of image (unit: mm)
	Vertical Space	vertical space of each frame of image (unit: mm)
	Roll 1: Starting	material's left starting position (unit: mm)
	Roll 1: width	material's width (unit: mm)
	Roll 1: margin	distance between the image and the material (unit: mm)

b) Print Head Alignment

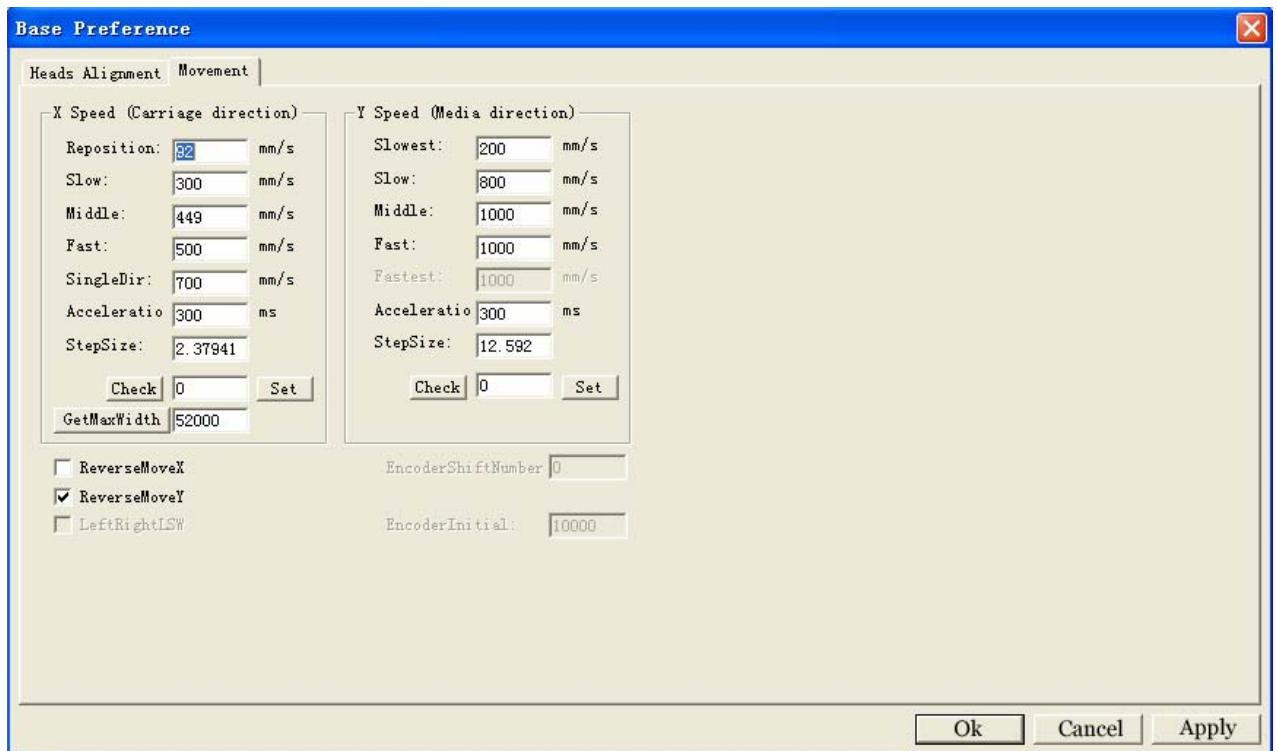


Head Team		
	Heads	Number of heads, each head is treated as two heads from its two lines of 256 nozzles, totaling 512 each



		head
	Colors	4 or 6
	NozzlesPerHead	128
	HeadDPI	185
Step Offset		different pass has different offset value. (unit: 1/4 jet point)
Bi-Difference		different print speed has different bi-directional printing offset value (unit: 2 jet points)
Accelerate Length		distance for speed up and slow down when carriage passes both borders of the print (unit:1 jet point)
Color Offset		(unit: 1 jet point)
	XTL	The offset value when printing towards left.
	XTR	The offset value when printing towards right.
	YOS	vertical offset value of each print head (cannot be negative)

c). Movement (performed by authorized technicians only)



X/Y Speed		
	Speed	five speeds are available, among which "low speed", "middle speed", and "high speed" are the 3 carriage speeds in print mode
	Acceleration	print head/material movement acceleration
	StepSize	a parameter for motor pulse

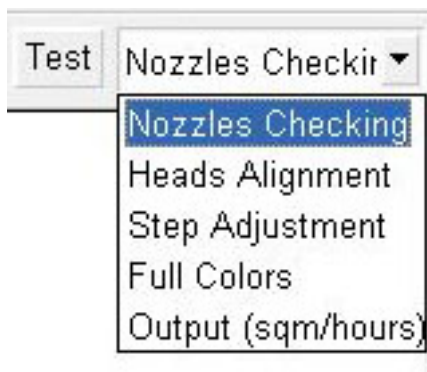
	Check, Set	auto calculate and correct "step size" Print head's direction: Click "move", the software moves the print head 1000 mm towards the middle. The actual moving distance will be shown aside. Click "Set", correct moving distance will be calculated. Material moving direction: click "move", material will be fed in by 100mm. Use staff gauge to measure the actual distance, input the value into the input table, and click "Set", the correct step size parameter will be shown. Repeat this step if necessary
ReverseMoveX		move carriage backward
ReverseMoveY		move media backward
LeftRightLSW		reverse left and right moving distance
EncoderShift Number		box closed
FireFrequency		
EncoderInitial		initial position of raster display/magnetic display

### 2.2.7 Status Bar

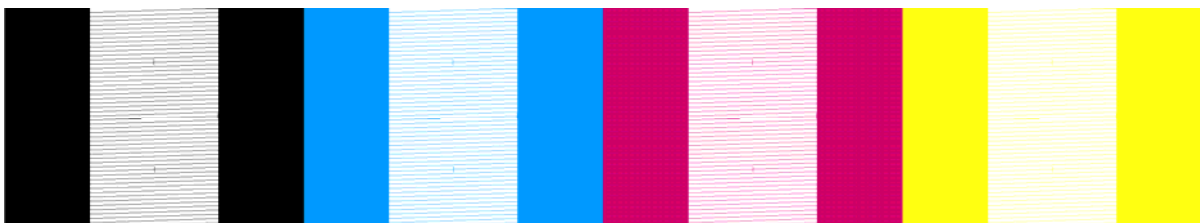
- a) POS: xxxxx/xxxx: carriage absolute and relative position.
- b) PSS: xx/xx/xxxxx: how many lines have been printed/how many lines in total/printing status.
- c) STS: xxxxx: on-off switch status (1/0): vacuum cleaner/left carriage limit switch/right carriage limit switch/emergency stop switch/material detection system).

## 2.3 Print Head Alignment

One can adjust print head offset parameters by printing the following test graph.



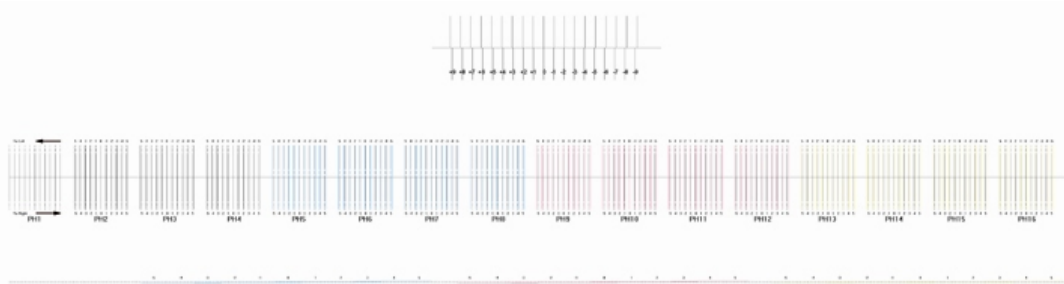
### 2.3.1 Print Head Status



Select “Nozzle Checking”, the above figure will be printed, showing the status of each print head.

### 2.3.2 Print Head Alignment

Choose “Head Alignment” from “Test” using “1 Pass”, and “Speed: Fast” to print. The following graph will be printed.



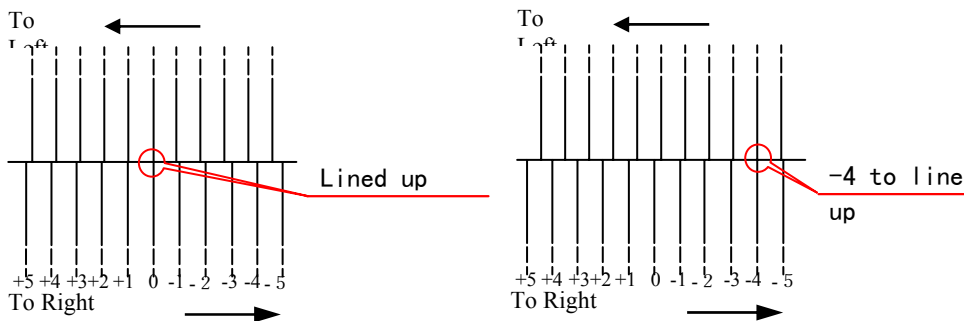
#### a). Bi-Direction Adjustment

Method:

Use the black “0” line to be lined up as the standard for good bi-direction adjustment.

If black “0” lines printed at left and right direction are not lined up straight, find the other two lines that lined well, input the upper number of that black line into box next to “Speed: Fast”.

Adjustment Illustration:



Bi-Directional Adjustment at other slow and middle speed can be done similarly by printing the above graph under the speed selected.

#### b). X-Direction Print Head Offset Adjustment

Method:

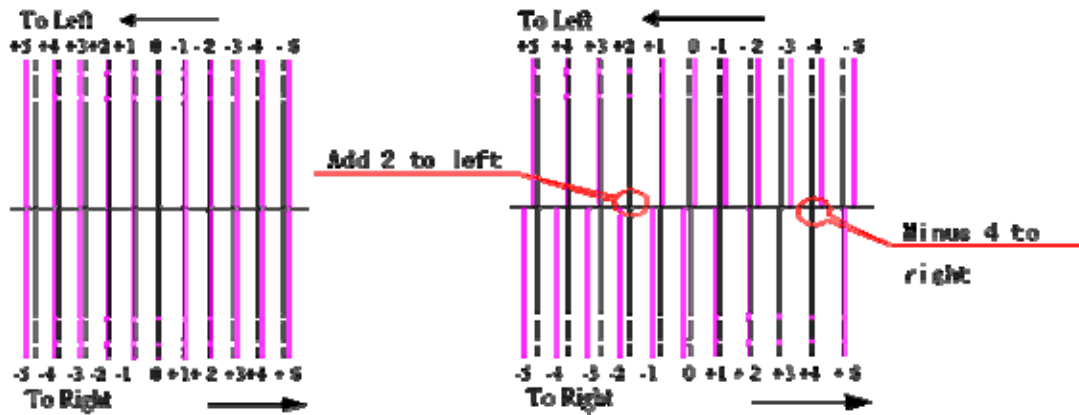
Use the first row of black print head, PH1, as the standard, try to adjust all the colors against the black color at both printing directions.

Read the number of the lines matched straight with black line in both printing directions. Add the numbers into the left and right color offset boxes, XTL and XTR, to their original values. Note, there are 12 column of boxes for 12 heads configuration, with 1 and 2 stands for black head, 3 and 4 for cyan head, 5 and 6 light cyan head, 7 and 8 for magenta head, 9 and 10 for light magenta head, 11 and 12 for yellow head.

Illustration (use magenta print head as an example)

Example of good X-offset Alignment

Example of X-offset need to be adjusted. Need to input 2 for XTL and -4 for XTR



c). X&Y Print Head Offset Adjustment

Use black as the standard. Check the horizontal line of each color that matches well with black line. Input the number of that line into the YOS box. Note put the same number into the tow boxes for the same head.

d). Step Offset Adjustment

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Print the above two thin lines with different PASS. Adjust step offset values and make the two lines as thin as possible.

# Chapter III - Maintenance

## 3.1. Daily Maintenance

### 3.1.1 Before Start Up

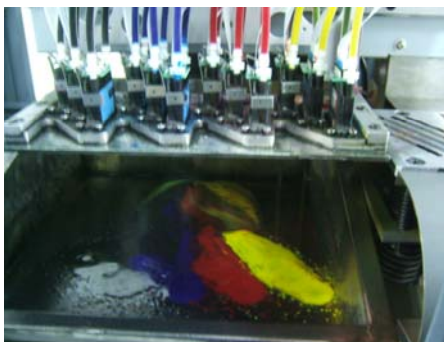
- Clean media roller and printing platform.
- Check ink bottles to make sure there is enough ink.
- Check waste ink bottle to see whether it is full. Place a new empty waste bottle if it is near full.
- Clean dust on the computer, power supply and circuit board.
- Remove print head protection plate.
- Switch on the main power supply, the computer, then the printer.
- Lift the emergence switches on both sides of the printer.
- Check whether the X and Y moving are running well. Make sure movement is of no resistance.
- Check the cleaning and lubricating status of the guide rail. Use lubricant such as motor oil to lubricate the rail.
- Add oil to the ball bearing on the guide rail. Use guide rail manufacturer designated grease gun and oil.
- Turn on HV voltage and choose "print/flash jetting" in the menu.
- Check indoor temperature (20<sup>0</sup>C -28<sup>0</sup>C) and moisture (40-80%).

### 3.1.2 During Printing

- Check print head status and clean print head by priming if necessary before printing.
- Check to make sure that there is no particle or dirt on the working platform.
- Touch the heating board to make sure that the heating temperature is in normal (Note: when the print head is moving, you are not allowed to touch the heating board).
- Listen and check whether there are irregular sounds or smell. Stop to check under that circumstance.

### 3.1.3 End of Day

- If printer will be used with next 2-3 days, clean the print heads by prime. Wipe clean the head plate. Turn off the printer.



- Fold a piece of non-woven cloth 3-4 time, and place it onto the print head protection plate. One could also use a piece of sponge, too.



- Place 2-3 layers of a clear food wrapping film on top of the non-woven cloth or the sponge.



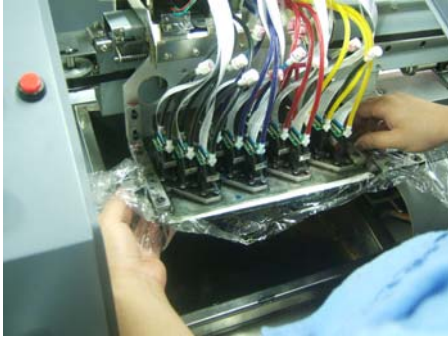
- Pour a small amount of Meijet branded flushing solution onto the film.



- Place the print head protection plate onto the bottom of print head plate.



- Move the carriage so that the print head protection plate sit well on the platform



- Inject Meijet brand flush solution into the plate for about 3 mm deep.



- Wrap up the film



- If the printer is not to be used for more than 3-4 days, especially when room temperature is over 30 C. The ink system must be flushed with Meijet flush solution to remove all the ink inside the ink line, ink sub tank and print head first before going through the above print head protection procedure.

### **3.2 Weekly Maintenance**

- Clean pinch roller with a damp towel
- Add lubricant to guide rail and grease to guide rail bearing

### **3.3 Monthly Maintenance**

- Change ink filter
- Check and fasten the screws on the transmission coupling, electric engine coupling.
- Check the fixation screws on the print head and strait guide rail. Check simultaneous timing belt. Fasten the loose ones.
- Check all the cooling fans and motors.
- Clear computer's hard drive space, scan and kill virus.
- Clean the dust on the power supply case, electricity control board and other circuit board with a clean air gun (must contain dry air)

### **3.4 Quarterly Maintenance**

- Heating Element Test: 15 minutes after the temperature is set, measure temperatures in the pre-heating and drying system. Make sure the left, middle and right temperature is not hotter than 10 degree C set, and no obvious temperature difference should be felt when touching it by hand.

### **3.5 Annual Maintenance**

- Inspection on horizontal level of guide rail and printing platform (contact Meijet or the dealer)
- Check the equipment thoroughly to see whether any screws are loose.

### **3.6 Common Knowledge about Print Head Maintenance**

- Use only Meijet brand ink and flush/clean solution. Meijet ink and solution are designed and tested to be compatible with Meijet printer. Use of other ink or solution could lead to negative effect on Meijet printer and print heads, invalidating printer warranty.
- Use only Meijet specified cleaning tool to wipe clean gently the print heads.
- Always keep the print head wet with Meijet ink or solution. Do not let print heads dry off. Always keep flash jetting on. Always make sure there is enough clean solution in the wrapping film to keep heads from drying when printer is not in use.
- When shipping print heads, always use anti-shocking package.
- When handle print heads, do not touch the print head nozzle surface.
- When priming print heads, turn HV button off.
- Make sure the print environment is clean and free from dust and static, dusty environment and static (from low humidity) could shorten print head life.

### **3.7 Ink Use and Maintenance**

- Store the ink in cool temperature less than 30 C.
- Do not shake ink before use.